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The Relationships between Collectivist Orientation, Perception of Practice Environment, Organizational Commitment, and Intention to Leave Current Job among Asian Nurses Working in the U.S.

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The Relationships between Collectivist Orientation, Perception of Practice Environment, Organizational Commitment, and Intention to Leave Current Job among Asian Nurses Working in the U.S.

by

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Dedication

This study is dedicated to my family, teachers, and friends for their unconditional support and encouragement, especially to be in memory of my father.

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The Relationships between Collectivist Orientation, Perception of Practice Environment, Organizational Commitment, and Intention to Leave Current Job among Asian Nurses Working in the U.S.

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Estimates indicate that Asian nurses have become the majority of international registered nurses (RNs) working in U.S. Studies have shown that differences in values exist between members of collectivistic cultures, such as those in Asian countries, and members of individualistic cultures, such as those in most Western countries. The purpose of this study was to understand factors related to turnover among Asian RNs working in the U.S.: level of collectivist orientation; perception of practice environment; degree of organizational commitment, and intention to leave current job.

The research design was cross-sectional, correlational, and descriptive. A temporally ordered model was developed using the research literature and well-established instruments measured Asian RNs' level of collectivist orientation

(Collectivist Orientation Scale), perception of practice environment (Practice Environment Scale of the Nursing Work Index), organizational commitment (Organizational Commitment Questionnaire), and intention to leave current job (Anticipated Turnover Scale). A snowball of 120 RNs was obtained. Descriptive, Pearson correlation, hierarchical regression, and the Sobel test were used to analyze data.

Results showed that Asian nurses were highly collectivist-oriented. Generally, they had high levels of satisfaction with their practice environment and organizational commitment, but had low intention to leave their current jobs. Collectivist orientation, perception of practice environment, and organizational commitment were significantly and positively correlated to each other, but were significantly and negatively associated with intention to leave. The strongest predictor of intention to leave was organizational commitment. Organizational commitment mediated the relationship between perception of practice environment and intention to leave.

It is important for administrators to understand characteristics of members of collectivist cultures and their organizational commitment. This may be crucial for administrators to lower the rate of turnover among Asian RNs. Future research should focus on longitudinal and controlled interventional studies to understand Asian nurses' satisfaction with their practice environment and their organizational commitment.

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Chapter 1: Introduction

The shortage of nurses has been a persistent problem in the history in the nursing profession. The problem has become worse in recent years. In the U.S., for example, the demand for nurses is expected to increase in the next few decades, whereas the actual supply of nurses is expected to decrease. In its projection of the supply, demand, and shortage of registered nurses from 2000 to 2020, the U.S. Department of Health and Human Services (DHHS) (2006) calculated and estimated that the national supply of full-time equivalent (FTE) registered nurses in 2000, 2005, 2010, 2015, and 2020 would fall short of demand by 6%, 10%, 17%, 27%, and 36%, respectively. Without sufficient staffing, current nursing personnel must bear increasingly heavy workloads, a situation that makes it worse for nurses to be willing to remain in their current positions.

Recognizing that this shortage is an increasingly grave problem, healthcare researchers are attempting to identify how to ameliorate its effects on practicing nurses. Studies indicate that many factors may contribute to the shortage, but one of the major factors is high turnover (Health Resources and Services Administration, HRSA, 2003; Fang, 2001; Price & Mueller, 1981). Gauerke (1977) proposed that an appropriate turnover rate may help revitalize an organization. Beyond the ideal rate, however, nursing turnover is costly, though not remediless or unpreventable.

In the U.S. the shortage of nurses and a high turnover among their ranks have had a negative impact on the delivery of healthcare, especially on patient outcomes and personnel replacement costs (Blendon et al., 2002; Needleman, Buerhaus, Mattke,

Stewart, & Zelevinsky, 2002; JCAHO, 2002; Aiken, Clarke, Sloane, Sochalski, & Silber, 2002). Because of the high costs of nursing turnover, it is important that administrators of healthcare organizations be able to identify typical factors underlying nurses' intention to leave their job and to find the means to retain their nursing staffs. In the past few years, researchers have conducted numerous studies into possible factors related to nurses' intention to leave their job and have proposed steps to decrease the turnover rate. According to those studies, Magnet hospitals that provide their nurses with a professional nursing practice environment have been more successful in attracting and retaining professional nurses (Kramer & Schmalenberg, 1988; Havens & Aiken, 1999). Consequently, determining the components of a nursing-practice environment is crucial in assessing the causes of nursing turnover (Lake, 2002).

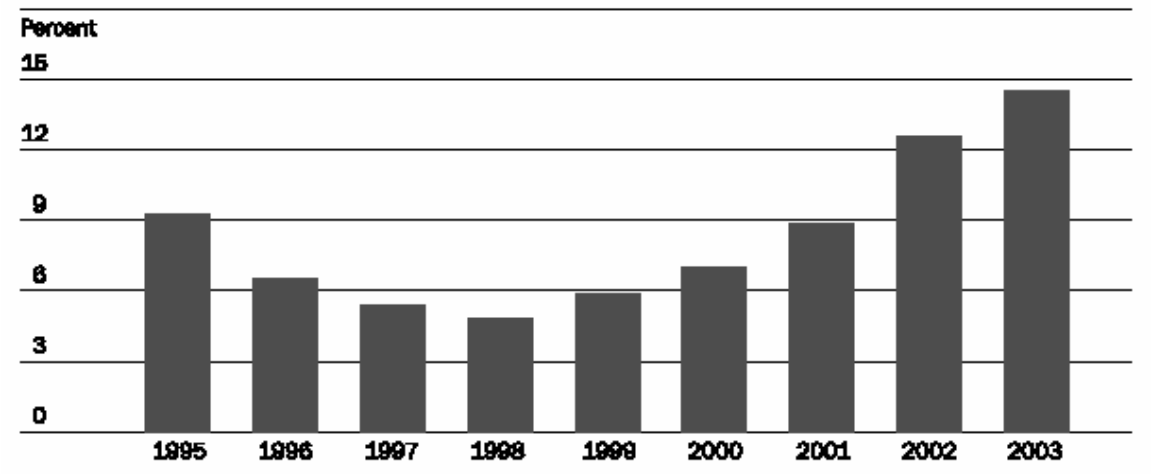
Working to solve the shortage problem from a different perspective, many healthcare organization employers have been attempting to halt the nursing shortage spiral by increasing the overall supply of available nurses and have become deeply reliant on nurses recruited from overseas. As a result, nurses in the U.S. are becoming increasingly diverse culturally and ethnically. Unfortunately, official statistical information regarding the annual number of international nurses and the proportion of nurses from the various countries is not readily available (Buchan & Sochalski, 2004). Researchers, however, have estimated the annual number of international nurses working in the U.S. by calculating the percentage of newly licensed registered nurses in the U.S. who are foreign educated. Accordingly, the percentage of international nurses in the U.S. was about 4.5% of the total U.S. nursing workforce in 1998, and it was 14.9% in 2003

(Brush, Sochalski, & Berger, 2004) (see Figure 1). Whereas the growth rate of international nurses is rapid overall, Asian nurses seem to represent the largest proportion of this rate growth. Estimates (see Table 1) indicate that foreign nursing graduates taking U.S. licensure exams in 2001 were predominately from five countries: the Philippines, 52.0%, Canada, 12%, Korea, 6%, India, 4.5%, and the United Kingdom, 3.0%. Thus, two-thirds of the international nurses coming to the U.S. are from Asia, i.e. Philippines, Korea, and India (Brush et al., 2004).

Studies have shown that differences in values exist between collectivistic cultures, such as the traditional cultures of Asian countries, and individualistic cultures, such as the cultures in U.S., Canada, and Europe. These differences are believed to contribute to differences in needs, satisfiers, autonomy and organizational commitment in nursing practice (Lopez, 1990; McNeese-Smith, 2001; Kirkman & Shapiro, 2001). Job satisfaction and organizational commitment remain important, however, since they are thought to be associated with positive organizational outcomes. Such outcomes include job involvement, job performance, organizational citizenship behaviors, and intent to stay or leave (Allen & Meyer, 1996; Allen & Meyer, 1990; Mowday, Porter, & Steers, 1982; Price & Mueller, 1981; Cavanagh & Coffin, 1992; Shields & Ward, 2001).

Because the nursing workforce in the U.S. is increasingly multi-cultural, it is important that healthcare administrators understand the cultural differences that their employees bring to an organization. These differences may be especially pronounced among Asian nurses, who, because they are from collectivist cultures, may have cultural values and practice environment perspectives distinctly different from those in Western

Figure 1. Percentage of newly licensed registered nurses (RNs) in the United States who are foreign educated, 1995-2003.



Note. The calculations using data from the National Council of State Boards of Nursing, various years. From "Imported Care: Recruiting Foreign Nurses to U.S. Health Care Facilities" by B. L Brush, J. Sochalski, and A. M. Berger, 2004, *Health Affairs, 23,* p. 80.

Table 1

Percentage of First-Time, Foreign-Trained Registered Nurse (RN) Candidates for U.S. Licensure Examination, by Top Six Exporting Countries, 1997-2001

	1997	1998	1999	2000	2001
Total number of candidates	6,574	6,045	6,381	7,506	8,613
Philippines	26.0%	27.0%	29.0%	44.0%	52.0%
Canada	29.0	26.0	21.0	15.0	12.0
Korea	4.0	6.0	11.0	8.0	6.0
India	7.0	6.0	6.0	6.0	4.5
United Kingdom	5.0	5.0	4.0	4.0	3.0
Nigeria	5.0	4.0	4.0	3.0	2.0

Note. The calculations using data from the National Council of State Boards of Nursing, "Licensure and Examination Statistics," 1997-2001. From "Imported Care: Recruiting Foreign Nurses to U.S. Health Care Facilities" by B. L Brush, J. Sochalski, and A. M. Berger, 2004, *Health Affairs, 23,* p. 80.

cultures. These different perspectives may be associated with new work values in nursing practice and differing levels of commitment to an organization (Spangler, 2001; Kirkman & Shapiro, 2001; Wang, Bishop, Chen, & Scott, 2002). The availability of a range of varied cultural perspectives may be especially advantageous during periods of severe nursing shortage, as has been the case in the U.S. In addition, an awareness of the Asian nurses' work values, organizational behaviors, needs, and satisfiers could help administrators identify workplace factors related to the retention or turnover of Asian nurses and to their willingness to work for the benefit of the organization.

Nursing researchers have proposed that turnover can be effectively and substantially improved through the use of strategies that solve work environment problems affecting the fundamental practice of nursing in order to increase job satisfaction for nurses, and strengthen nurses' organizational commitment (Agency for Healthcare Research and Quality, AHRQ, 2004; Flynn & Aiken, 2002; McNeese-Smith, 2001, Stilwell, et al, 2004). However, researchers in industrial settings proposed that individuals' intention to leave is an immediate predictor of the turnover behavior (Randall, 1990; Fishbein, 1979), whereas organizational commitment (Chen & Francesco, 2000; Fang, 2001) and job satisfaction (Larrabee, Janney, & Ostrow, 2003; Shader, Broome, Broome, West, & Nash, 2001) are the significant predictors of intention to leave. In summary, to retain Asian nurses and prevent turnover, clearly, Asian nurses' perceptions of their practice environment, commitment to their organization, and their intention to leave the current job are all important. Yet, those three issues have received little study. Only a few studies on nurses' intention to leave their current job have involved Asian

nurses. Asian nurses were either grouped with other ethnic groups, or their numbers were too small to be analyzed independently and reliably. Consequently, as the population of Asian nurses in the U.S. continues to grow, the level at which those nurses perceive their practice environment, the degree they feel committed to their organizations, and the degree to which they intend to leave or stay in the current job become increasingly important. Currently, however, our knowledge in those areas is extremely deficient.

Statement of Purpose

The purpose of this study was to understand four factors related to turnover among Asian nurses working in the U.S. Again, those factors were: (1) the level of the Asian nurses' collectivist orientation; (2) their perceptions of their practice environment; (3) degree that they were committed to their organization, and (4) degree of their intention to leave current job.

Collectivist orientation is defined as a social pattern associated with closely linked individuals who see themselves as parts of one or more groups as measured by the Collectivist Orientation (CO) scale. Perception of practice environment is defined as "the organizational characteristics of a work setting that facilitate or constrain professional nursing practice" (Lake, 2002, p. 178) as measured by the Practice Environment Scale of the Nursing Work Index (PES-NWI). Organizational commitment is defined as individuals' general attitudinal stance toward their organization as measured by the Organizational Commitment Questionnaire (OCQ). Intention to leave is defined as individuals' perceptions of the possibility of voluntarily terminating their current job as measured by the Anticipated Turnover Scale (ATS). Furthermore, this study examined

whether relationships exist among cultural orientation toward collectivism, perception of practice environment, organizational commitment, and intention to leave the current job. Finally, the study investigated whether organizational commitment serves as a mediator of perception of practice environment and intention to leave.

Background and Significance

Projected Supply, Demand, and Shortages of Registered Nurses

The shortage of nurses is becoming a global problem, affecting healthcare services in countries like the U.S., U.K., Canada, and New Zealand. Compared to other countries, however, the U.S. is predicted to face a major shortfall of nurses (Aiken, Buchan, Sochalski, Nichols, & Powell, 2004). This shortage is expected to reach 1,016,900 or 36% by 2020 (DHHS, 2006). Although there are nearly 3 million licensed registered nurses in the U.S. (Stone, Clarke, Cimiotti, & Correa-de-Araujo, 2004), about 18 to 20% of them are not employed in nursing (Colosi, 2002; DHHS, 2002). In addition, the nursing population is aging, which represents another threat of shortage. The average age of the registered nurse population in 2000 was 45.2 years, and the average will be nearer retirement age by 2010 (DHHS, 2002; GAO, 2001). Each year it seems that the supply of nurses barely meets the demand, but shortages appear likely in the near future. The number of nurses is projected to grow by only 6% by 2020, whereas demand for nursing care is projected to grow by nearly 36%, an average of 1.7% annually (DHHS, 2002).

Nurses are the largest group of healthcare providers in the healthcare delivery system. According to the First Consulting Group (FCG) (2001), most of those nurses—1 million registered nurses—work in hospitals. Yet, 60% of hospitals report that vacancy

rates for registered nurses have increased since 1999, and 14% are experiencing a serious nursing shortages (more than 20% of positions vacant). The vacant positions for nurses have risen to 168,000 and 75% of those positions are for registered nurses (FCG, 2001). The number of vacancies and vacancy rates are also serious in nursing home facilities. In 2002, the vacancy rate among registered nurses in nursing home facilities was 15%, or 13,900 vacant positions, and the rate among LPNs was 13.2%, or 25,100 vacant positions (American Health Care Association, AHCA, 2003).

The Impact of the Nursing Shortage

The shortage of nurses has been associated with a series of severe national healthcare issues. Between 1996 and 2,000 the national employment of RNs per capita has decreased by 2% from 79.8 RNs to 78.2 per 10,000 persons. Overall, 50% of the states face a decline in per-capita nurse employment (GAO, 2001). In addition, the national shortages are causing a decline in available hospital beds, the closing of healthcare units, and postponed or canceled elective surgeries (Colosi, 2002), all of which reduces the patients' access to the treatment of disease.

Studies have shown that the nursing shortage has negatively impacted the quality of patient outcomes (Blendon et al., 2002; Needleman et al., 2002; JCAHO, 2002; Aiken et al., 2002). In fact, the shortage of nurses is regarded as a leading cause of medical errors by physicians (Blendon et al., 2002). The increase in medical injuries during hospitalization resulted in higher costs of healthcare, a greater number of deaths, or longer hospital stays (AHRQ, 2004; Aiken et al., 2002; Needleman et al., 2002; Zhan & Miller, 2003; American Organization of Nurse Executives, AONE, 2003).

Nursing researchers have also found a significant correlation between nurse staffing and the quality of patient care. Higher proportions of nursing care, i.e., a greater number of hours of care per day provided by nurses are positively correlated to successful patient outcomes (Needleman et al., 2002). Low levels of nurse staffing, on the other hand, correlate to unanticipated events in hospitals that have contributed to 24% of deaths, injuries, or permanent loss of function (JCAHO, 2002). Hospitalized patients undergoing common surgeries have an up to 31% greater chance of dying when the hospital has a low nurse-to-patient staffing ratio (Aiken et. al., 2002). Research has also revealed an escalation in the use of extended work shifts and overtime for nurses. One study reported that more medical errors are made when nurses work more than 12 hours at a stretch, put in overtime, or work more than 40 hours per week (Rogers, Hwang, Scott, Aiken, & Dinges, 2004).

Undoubtedly, sufficient nurse staffing has a significant effect on patient outcomes. One study found that adding just one nurse to a patient's care rotation reduced the odds of the patient's mortality by half (Parker-Pope, 2001). A report from the Department of Health and Human Services (DHHS, 2001) showed that hospitals with full nurse staffing had a 2% to 25% reduction in unfavorable patient outcomes. In addition, researchers who studied 168 hospitals have shown that hospitals with a mean patient-to-nurse ratio of 4:1 have lower mortality rates than hospitals with a mean patient-to-nurse ratio of 8:1 (Aiken et al., 2002). Another study found that the 30-day mortality rate among AIDS patients was lower where there were both a higher nurse-to-patient ratio and the services of a physician specializing in AIDS (Aiken, Sloane, Lake, Sochalski, & Weber, 1999).

Turnover and Turnover Rates

Many factors may contribute to the nursing shortage, but high nurse turnover is one of the major contributors (HRSA, 2003; Fang, 2001; Price & Mueller, 1981). Gauerke (1977) proposed that an appropriate organizational turnover rate is between 5% and 10%. Such a rate promotes a better work environment in the organization and avoids inefficiencies and boredom with job content. In contrast, a high turnover rate leads to a loss of experienced staff, information, and technological knowledge.

A recent estimate of the average turnover rates for nurses in U.S. hospitals was 21.3% (The HSM Group, Ltd., 2002). In nursing homes, the turnover rate was 48.9% for both RNs and LPNs (AHCA, 2003). Those figures are far higher than the overall turnover rate of 2.2% for those employed in the health and social services and the turnover rate of 1.2% for those employed in educational services (Stone et al., 2004). In comparison, the figure for the average international nursing turnover rate was 15% (Health Care Advisory Board, HCAB, 2001).

Disadvantages of High Turnover

Because of the severe national nursing shortage of nurses, it is important that health care administrators become aware of the adverse effects of high nursing turnover and turnover costs. From the organizational perspective, those costs are both explicit and implicit.

Explicit costs. In terms of explicit costs, high turnover decreases operational revenues for an organization and increases the personnel replacement costs. When hospitals lose experienced nurses, the consequences include extra expenditures to recruit

and train qualified replacements and greater dependence on nurses from temporary agencies to fill vacant positions (Colosi, 2002; Jones, 1992; Bliss & Associates, nd). According to Jones (1992), the overall turnover cost per RN was 19.1% of the mean total annual registered nurse's salary. In addition, if hospitals cannot recruit enough nurses, they may have to reduce the number of beds available to patients, close units, postpone or cancel elective surgeries, defer measures to expand their services, and cut back in expenditures for new technology (Colosi, 2002). These actions will lead to the loss of an organization's yearly revenues and reduce its ability to compete. The calculations of turnover costs, however, are complicated because such calculations must not only account for the cash costs of employee turnover but also the broader costs and impacts of turnover. Therefore, some experts estimated that the cost of turnover can be much higher, perhaps up to 150% of an employee's annual compensation (Bliss & Associates, n.d.).

Implicit costs. The costs of employee turnover begin when individual nurses decide to leave. At that point, their minds and full attention are no longer fully focused on their duties. The result is a loss of employee productivity and a lower quality of service (Bliss & Associates, nd). In addition, as one study showed, high turnover has adverse attitudinal and behavioral consequences for nurses who stay on the job. When a co-worker's reasons for quitting reflect negatively on the job, the morale of the employees who stay may suffer, and they too may become dissatisfied with their job and the organization. As a result, one or two instances of turnover may trigger additional turnover (Ingersoll, Olsan, Drew-Cates, DeVinnery, & Davies, 2002; Sheehan, 1991; Krackhardt, 1986; Staw, 1980).

The most significant cost of high nursing turnover is reduction in the quality of

patient outcomes because of inadequate staffing and loss of experienced nurses (Agency for Healthcare Research and Quality, AHRQ, 2004; DHHS, 2001; Needleman et al., 2002; Curtin & Simpson, 2000; Aiken et al., 2002; JCAO, 2002). When a hospital is understaffed, and its patient outcomes become less than high quality, the hospital's reputation suffers directly and its operational revenues decline indirectly, and the risk of adverse patient-care events increases. In addition, in response to high nursing turnover rates, many healthcare facilities have increased nurses' patient loads or hired nonpermanent nurses, such as those from agencies, who are not immediately familiar with the work environment and patients. Such remedies not only increase hospital personnel costs, but also result in poor patient outcomes because of the fragmentation of health care and the high patient-to-nurse ratios (GAO, 2001; Manias, Aitken, Peerson, Parker, & Wong, 2003; Aiken et al., 2002).

Strategies for Dealing with Turnover

According to investigations by the U.S. government (HRSA, 2003; DHHS, 2002), nursing shortages are caused by the growth in demand combined with the decline in supply of nurses. Between 2000 and 2020, the factors for the growth in demand are the following: (1) the growth of the nation's population by 18%, or 50 million people, (2) a projected 54% increase of persons aged 65 years and older who will require higher levels of medical care, and (3) advances in medical technology that heighten the need for nurses. The factors for the decline in supply include the following: (1) high nursing turnover, (2) the declining number of nursing school enrollees, graduates, and faculty, and (3) the aging of the nurse workforce.

Studies have proposed that the two effective ways to ease the current shortage of nurses are to decrease nurse turnover and broaden the recruitment base (Buchan & Sochalski, 2004; GAO, 2001). To balance the demand-and-supply equation of the nursing workforce, two major types of policy have been suggested: increase the supply of nurses and decrease nursing turnover rates, the latter which is of primary concern in this study.

Policies for increasing the supply of nurses. The main policy has been to attract more people, especially young persons, to the nursing profession. To increase nursing program enrollments and the number of graduates, the U.S. Department of Health Resources and Services Administration (HRSA) (2003) provides nursing scholarship programs (NSP) and National Health Service Corps (NHSC) scholarships. Those scholarships are intended to encourage people to study within nursing programs.

Such policies may satisfy the goals of the policymakers, but they do so only in the long term. According to the report of the American Association of Colleges of Nursing (AACN) (2003), although there was a three-year upward trend in the number of nurses in entry-level baccalaureate programs, culminating in an increase of 15.9% by the fall 2003, this growth was not enough to offset a previous six-year decline in enrollment, nor is it expected to redress sufficiently the current nursing shortage. In addition, the U.S. Department of Health and Human Services (DHHS) (2002) reported that, according to information from the National Council of State Boards of Nursing, the number of nursing school graduates who took the National Council License Examination (NCLEX) for the RN license decreased by 26.9% from 1995 to 2002. Declines were seen across all programs that reward diplomas, associate and baccalaureates degrees.

In the meantime, federal and state governments and hospitals have been seeking quicker ways to solve the nursing shortage. For example, to quickly increase the overall supply of nurses, for the past 50 years the U.S. government and healthcare institutions have been increasingly importing nurses (Brush & Berger, 2002). Today, the U.S. is recruiting greater numbers of international nurses than ever before (see Figure 1), and is poised to greatly increase those efforts (Brush et al., 2004; Buchan & Sochalski, 2004).

According to estimates of the number of foreign nursing graduates taking U.S. licensure exams from 1998 to 2001 (see Table 1.), Asian nurses represent the largest proportion of the international nursing workforce in the U.S. (Brush et al., 2004). This trend is especially true for hospitals; hospitals are more likely to employ international nurses full time and thus become the primary practice setting for Asian nurses (Minority Nurse.Com, 2005).

Policies for decreasing nursing turnover rates. Hospitals are facing serious challenges in their attempts to provide high-quality care due to high nursing turnover (Khowaja, Merchant & Hirani, 2005). Studies show that the major ways to ease the problems caused by the nursing shortage are to decrease nursing turnover rates and increase retention (Buchan & Sochalski, 2004; Stilwell, et al. 2004; GAO, 2001). To improve the recruitment and retention of nurses, the U.S. Congress passed the Nurse Reinvestment Act in 2002. That legislation established a National Nurse Service Corps (NNSC), and provided scholarships and loans through a Nursing Education Loan Repayment Program (NELRP) to nursing students who were willing to serve in hospitals for periods of two years. In addition, the legislation offered US nurses continuing

education, geriatric training, and career-ladder programs for job advancement, as well as internship and mentor programs (AHRQ, 2004).

Factors Influencing Turnover

A lower nursing turnover means not only that experienced nurses remain in their hospital jobs longer but also that patients are thought to receive better quality of care. Thus, many governmental incentive programs try to retain current employees while attracting young people willing to devote themselves to the nursing profession. A host of researchers have identified job dissatisfaction as a fundamental factor underlying the current problems of high nursing turnover rates and the difficulty of recruiting new nurses (GAO, 2001; HCAB, 2001; Aiken et al., 2002; Khowaja et al., 2005). In one survey (HCAB, 2001), 51% of RNs described themselves as somewhat dissatisfied with their current job, and 28% were very dissatisfied. In another survey, conducted by the American Nurses Association (ANA) (2001), 54% of nurses stated that they would not recommend the nursing profession as a career for their children or friends.

Nurses' dissatisfaction seems to be driven by a number of factors, but the one thought to have the most impact on job satisfaction is the work environment. For example, the American Nurses Association (2001) sees poor working conditions as the primary cause of the high nursing turnover and proposes that many nurses are not willing to work in today's healthcare environment. Other studies show similar findings; namely, the quality of the practice environment appears to be at the heart of job satisfaction and nursing turnover (Organization for Economic Co-operation & Development, OECD, 2005; Aiken et al., 2001, 2002; Tumulty, Jernigan, & Kohut, 1994). Even for nurses who

stay in their job, a poor practice environment is the main reason that they intend to leave in the near future (Stone et al., 2004). The implication is that nurses' perceptions of their practice environment are a key indicator of job satisfaction. Therefore, an improvement of their practice environment results in nurses' job satisfaction that is able to successfully lead to nurse retention and therefore a decrease in staff turnover (Khowaja et al., 2005). Clearly, therefore, one of the important strategies for improving nursing turnover must be to improve nurses' practice environment. In addition, a growing body of research in industrial settings have indicated that organizational commitment is either negatively related to or a stronger predictor of intention to leave or turnover than job satisfaction (Wasti, 2003a; Wastib, 2003; Chen & Francesco, 2000; Aryee, Wyatt, & Min, 1991; DeConinck & Bachmann, 1994).

The Importance of Intention to Leave to Administrators

Although the explicit costs that a hospital must bear from high nursing turnover are more apparent, the implicit costs profoundly and seriously influence the operation of the hospital and the care of its patients. The worrying thing is that some studies have shown that many clinical nursing professionals have intention to leave either their profession or their current job. For instance, one study has shown that one out of every five nurses is planning to leave the nursing profession for reasons other than retirement within the next five years (Federation of Nurses and Health Professionals, FNHP, 2001). Another study has a more grave result: about 20% of registered nurses indicated their intention to quit the profession within the next year (GAO, 2001). Therefore, it is important that healthcare administrators be able to identify nurses who intend to leave their current job.

Although nursing turnover rates are high, they can be predicted and remedied through an understanding of the factors behind nurses' intention to leave. In other words, the degree to which nurses intend to leave is an important indicator of nurses' turnover behaviors (Price & Mueller, 1981; Somers, 1995). Such a predictor, when known early enough, provides information for administrators to take measures to prevent nurses from leaving.

Because of the influx of Asians into the ranks of U.S. nurses, research is needed that focuses on collectivist cultural orientation, perception of practice environment, organizational commitment, and intention to leave as these factors relate to Asian nurses. The results of such research would provide important reference information for healthcare administrators in the U.S. who wish to understand the factors that influence their Asian nurses' intention to leave their current job. Once those workplace factors are known, administrators would be able to modify them to reduce Asian nurses' intention to leave and to increase their willingness to work for the benefit of the organization and, more importantly, to promote the quality of patient outcomes. The research, moreover, would provide administrators with information about the characteristics of Asian nurses that might be quite different from the western nurses due to cultural differences. In addition, the research would help administrators understand Asian nurses to focus their organizational efforts to redress some of the problems that contribute to turnover in the currently severe shortage of nurses. Finally, the instruments developed and validated by this research could be used by other researchers interested in Asian nurses.

Statement of Problem

Because of the nursing shortage, American healthcare institutions are increasing their recruitment of nurses from other countries and cultures, and nursing staffs are becoming increasingly racially and ethnically diverse. Cultural researchers have found that values and beliefs often differ among peoples of different cultures (Hofstede, 1980; Schwartz, 1999). Two or more countries that have similar cultures are called a cultural group (Hofstede, 1980; Schwartz, 1999). Typically, the countries of a cultural group are related by geographical proximity, and they have a shared history, system of norms and values, and religion (Triandis, 2001; Schwartz, 1999).

Cultures have been identified as collectivism or individualism. Collectivism is a social pattern associated with closely linked individuals who view themselves as members of a group. Individualism is a social pattern associated with loosely linked individuals who view themselves as independent of collectives (Triandis, 1995). Research has also shown that collectivistic and individualistic cultures produce quite different value systems. Depending on the culture, therefore, different factors determine persons' attitudes to their job and to their organizations. For example, in industrial settings, job satisfaction and organizational commitment have been found to be positively related to collectivism and negatively related to individualism (Palich, Hom, & Griffeth, 1995; Hui, Yee, & Eastman, 1995). Yet, job satisfaction and organizational commitment are associated with other positive outcomes, such as less employee absence, less intention to leave, and better job performance (Allen & Meyer, 1996; Allen & Meyer, 1990; Mowday, Porter, & Dubin, 1974; Mowday et al., 1982; Steers, 1977). In the U.S., where

the demand for nurses is expected to increase while the actual supply of nurses grows smaller, how can healthcare organizations operate with fewer nurses while maintaining high-quality services? One answer may be to improve the nursing practice environment that would foster nurses' job satisfaction, and strengthen organizational commitment among nurses.

Thus, nurses from collectivistic cultures, such as those from Asian countries, may differ from nurses from individualistic cultures such as that of the U.S., Canada, and Britain. For example, they may differ in their orientations toward professional practice and their attitudes toward the job and commitment to the organization (Lopez, 1990; McNeese-Smith, 2001). Therefore, any study designed to investigate nursing turnover or intention to leave should include full consideration of the differences in work-related values among persons from different cultural groups with respect to individualism and collectivism. In particular, cultural factors may have direct or indirect effects on nurses' decisions to leave their job.

As discussed previously, an increasing number of nurses from other cultures have become licensed in the U.S. in recent years. Most are from Asian countries noted for their collectivist cultures—cultures that are very different from the individualist cultures of Western countries. It is crucial that U.S. healthcare administrators to understand the values that Asian nurses bring to their professional practice and attitudes toward their job and their organization. So far, however, little nursing research in the U.S has explored the relationships among collectivist orientation, perception of practice environment, organizational commitment, and intention to leave as factors that apply to Asian nurses

working in the U.S.

Research Questions

Research questions that will guide this study include the following:

1. What are Asian nurses' degree of collectivist orientation, perception of practice environment, organizational commitment, and intention to leave current job?
2. What relationships exist among nurses' collectivist orientation, perception of practice environment, organizational commitment, and intention to leave current job?
3. What relationships exist among nurses' perception of practice environment, organizational commitment and intention to leave current job with collectivist orientation held constant?
4. Does organizational commitment serve as a mediator of nurses' perception of practice environment and intention to leave?

Definitions of Major Concepts

Researchers have provided various definitions for each major variable in their studies. A list of these varied definitions for each variable will be illustrated. However, a single definition is chosen for this study. The rationale for the choice is that this author not only provides theoretical definition for each variable of interest, but also provides operational definitions to precisely measure the variables. The instruments for measuring the variables have been tested with good reliability and validity, and have been used in nursing, non-nursing, and/or cross cultural population studies.

Collectivist Orientation

Collectivism represents a set of patterns composed of subjective elements of a

culture. Those elements include shared beliefs, attitudes, norms, roles, and values. In the case of collectivism, these elements emphasize social integrity and a high regard for in-groups (for example, familial, community, or national groups). Researchers have provided various definitions for the collectivist orientation, and those related to this study are summarized in Table 2. The definition of collectivism used for this study is from Triandis (1995). Triandis proposed that collectivism is characterized by "(1) emphasis on the views, needs, and goals of the in-group rather than on the self; (2) emphasis on behavior determined by social norms and duties rather than by pleasure or personal advantage; (3) common beliefs that are shared with the in-group; and (4) willingness to cooperate with in-group members." According to these characteristics of collectivism, a collectivist orientation indicates how the individual will value loyalty to an in-group, give priority to and work diligently for the goals and benefits of the in-group, shape their behavior primarily on the basis of in-group norms, and behave in a communal way thought to be closely aligned with organizational commitment (Mills & Clark, 1982). In this study, the concept of collectivist orientation is measured by the collectivist orientation (CO) scale (Wang et al., 2002).

Perception of Practice Environment

A variety of definitions and measures of practice environment have been proposed in previous studies. Some of the definitions most relevant to this study are summarized in Table 3. The current study adopts the definition of practice environment by Lake (2002), who defines a nursing practice environment as "the organizational characteristics of a work setting that facilitate or constrain professional nursing practice" (p. 178). These

Table 2

Related Definitions of Collectivist Orientation

Citations	Definitions
Hui & Yee (1994)	A syndrome of attitudes and behaviors embodying (1) "consideration of implications of one's own decisions and/or actions for other people, (2) sharing of material resources, (3) sharing of nonmaterial resources, (4) susceptibility to social influence, (5) self-presentation and face-work, (6) sharing of outcomes, and (7) feeling of involvement in others' lives" (p. 410).
Triandis (1995)	Collectivist orientation including (1) "emphasis on the views, needs, and goals of the in-group rather than on the self; (2) emphasis on behavior determined by social norms and duties rather than by pleasure or personal advantage; (3) common beliefs that are shared with the in-group, and (4) willingness to cooperate with in-group members" (p. 6).
Wagner & Moch (1986)	Group demands and interests take precedence over the desires and needs of the individual.

Table 3

Related Definitions of Practice Environment

Citations	Definitions
Coyle-Shapiro & Conway (2005)	An individual's perception of organizational treatment regardless of whether that treatment was explicitly or implicitly promised.
Eisenberger, Huntington, Hutchison, & Sowa (1986)	The content of organizational support includes caring for employees' well-being and assistance with job performance, job enrichment, and working conditions.
Estabrooks et al (2002)	"A set of workplace features that enable nurses to demonstrate professional practice……" (p. 265).
Hoffart & Woods (1996)	"A system that supports registered nurse control over the delivery of nursing care and the environment in which care is delivered" (p. 354).
Lake (2002)	"The organizational characteristics of a work setting that facilitate or constrain professional nursing practice" (p. 178). Hospital characteristics are measured by: (1) nurse participation in hospital affairs, (2) nursing foundations for quality of care, (3) nurse manager ability, leadership and support of nurses, (4) staffing and resource adequacy, and (5) collegial nurse-physician relations
Sleutel (2000)	"A set of concrete or abstract psychological features, such as job characteristics, autonomy, and promotion opportunities perceived by job incumbents who compare these perceptions against a set of standards, values, or needs" (p. 55).

traits, or indicators of a work setting include nurse participation in hospital affairs, nursing foundations for the quality of care, nurse manager ability, leadership, and support of nurses, adequacy of staffing and resources, and collegial nurse-physician relations. In this study, the concept of perception of practice environment is measured by the practice environment scale of the nursing work index (PES-NWI) (Lake, 2002).

Organizational Commitment

Organizational commitment has been conceptualized in a variety of ways. The most influential aspects of commitment are attitudinal commitments, as described by Mowday and colleagues (Morrow, 1993; Becker, Randall, & Riegel, 1995; Brown, 1996; Slocombe & Dougherty, 1998; Yousef, 2003). Meanwhile, organizational commitment and attitudinal commitment are used interchangeably by other researchers (Kong, Wertheimer, Serradell, & McGhan, 1994). The definitions most relevant to this study are summarized in Table 4. In the current study, the definition of organizational commitment is derived from that of Mowday et al. (1979), that characterizes organizational commitment in three related dimensions: "(1) a strong belief in and acceptance of the organization's goals and values, (2) a willingness to exert considerable effort on behalf of the organization, and (3) a strong desire to maintain membership in the organization" (p.226). In this study, this concept is measured by the Organizational Commitment Questionnaire (OCQ) (Mowday et al., 1979).

Intention to Leave

From reviewing the literature on turnover, the term, intention to leave (Larrabee et al., 2003; Rambur, Palumbo, McIntosh, & Mongeon, 2003), intent to quit (Kong et al.,

Table 4

Related Definitions of Organizational Commitment

Citations	Definitions
Buchanan (1974)	"A partisan, affective attachment to the goals and values of the organization, to one's role in relation to the goals and values, and to the organization for its own sake, apart from its purely instrumental worth" (p. 533).
Mowday et al. (1979)	(1) "a strong belief in and acceptance of the organization's goals and values, (2) a willingness to exert considerable effort on behalf of the organization, and (3) a strong desire to maintain membership in the organization" (p.226).
Reichers (1985)	"The process of identification with the goals of an organization's multiple constituencies" (p. 465).
Still (1983)	An individual's psychological bond to the job, the career, or the organization, a bond that comprises an affect for and attachment to the organization.
Weiner (1982)	Reflection of one's persistence in making sacrifice to the good of the organization, and indicating the individual's preoccupation with the organization, as evidenced by the individual's devotion of personal time to organizational activities.

1994; Stumpf & Hartman, 1984; Shields & Ward, 2001), turnover intention (Lum et al., 1998; Lu, Lin, Wu, Hsieh, & Chang, 2002), turnover propensity (Fang, 2001), and intent to stay (Sourdif, 2004; Ellenbecker, 2004) seemed to be most often used as predicting employees' turnover behaviors. Definitions of intention to leave that are relevant to this study are summarized in Table 5.

Although different terminology has been used to denote intention to leave, the current study adopts the definition of Hinshaw and Atwood (1985): "a nursing staff member's perception or opinion of the possibility of voluntarily terminating his or her current position" (p. 55). In this study, the concept of intention to leave is measured by the anticipated turnover scale (ATS) (Hinshaw & Atwood, 1985).

Nurses

Nurses are defined as RNs who are employed by U.S. hospitals. Nurses cannot be working for an agency (e.g., traveling nurses). However, they can work as full-time or part-time in staff or nonmanagement positions, while performing direct patient care.

Asians

People who were born in Asian countries in Far East are regarded as with similar cultural values—collectivist orientation. These Asian countries include China, Hong-Kong, India, Indonesia, Japan, Korea, Malaysia, Philippines, Singapore, Thailand, Taiwan, Vietnam, or other countries in the Far East.

Conceptual Framework

A temporally ordered, recursive model for studying Asian nurses' intention to leave their current job was developed for this study by the investigator. Evidence for the

Table 5

Related Definitions of Intention to leave

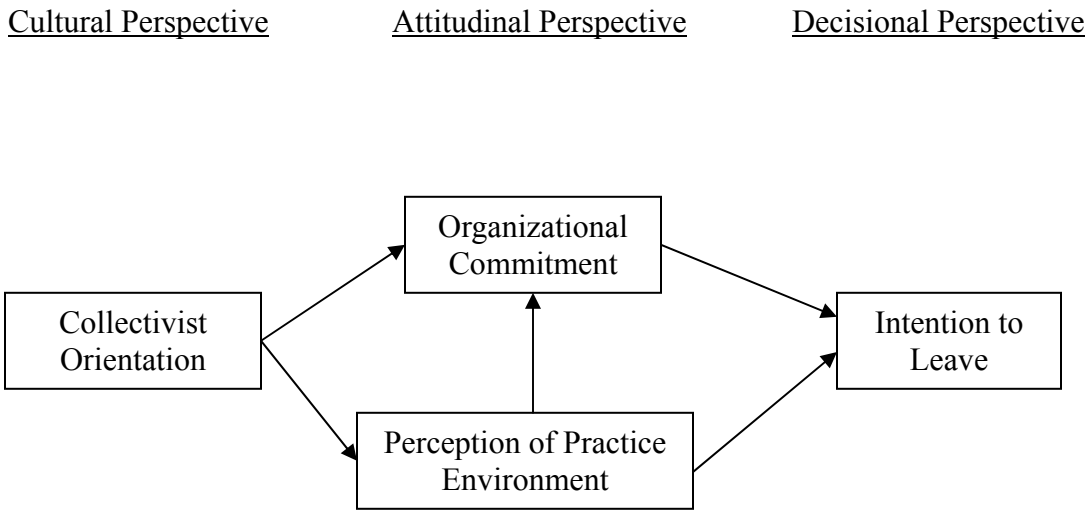
Citations	Definitions
Cavanagh (1990)	"The perceived likelihood of an individual staying within an organization" (p. 374).
Ellenbecker (2004)	"A nurse's perception of the possibility of leaving or staying in the present job" (p. 304).
Hinshaw & Atwood (1985)	"A nursing staff member's perception or opinion of the possibility of voluntarily terminating his or her current position" (p. 55).
Kong et al. (1994)	"The employee's intention to leave the employing organization voluntarily and excludes the situation in which an employee is fired" (p. 172).
Price & Mueller (1981)	"The estimated likelihood of continued membership in an organization" (p. 546).

linkages shown in the model came from the research literature. The model provided a study framework for the examination of relationships among the variables. In addition, researchers have empirically developed a variety of models to explain the turnover behavior of nurses (Price & Muller, 1981; Cavanagh & Coffin, 1992; Prestholdt, Lane, & Mathews, 1987; Newman, 1974). The common theme emerging from these models is that turnover is a multistage process with attitudinal, decisional, and behavioral components (Lum, Kervin, Clark, Reid, & Sirola, 1998). This finding supports the author's hypothesized model in this study. However, the current study did not explore the behavioral component; instead, it examined Asian nurses' attitudinal components including their perception of practice environment and organizational commitment, and nurses' intention to leave, a decisional component. In short, the model (see Figure 2) represents Asian nurses from three perspectives, cultural (i.e. collectivist orientation), attitudinal (i.e. perception of practice environment and organizational commitment), and decisional (i.e. intention to leave).

The Cultural Perspective

From a cultural perspective, nursing staffs in the U.S. are becoming increasingly culturally and ethnically diverse. Researchers (Brush, 1994; Brush & Berger, 2002; Brush et al., 2004) point out that the immigration of international nurses who have graduated from schools in collectivistic countries is increasing, whereas those from schools in individualistic countries are decreasing. Research has also shown that value differences between collectivistic and individualistic cultures may underlie differences in assertiveness, autonomy, satisfiers, and organizational commitment in nursing practice

Figure 2. Conceptual model for Asian nurses' intention to leave.



(Lopez, 1990). In short, differences in cultural orientation can be expected to produce differences in professional-practice orientation. These differences should emerge in comparisons of nurses' values, perceptions about practice environment (Lopez, 1990; McNeese-Smith, 2001).

The Attitudinal Perspective

Attitudinal measures include individuals' views about their job and included: nurses' perceptions of their practice environment, and their views toward their organization in terms of organizational commitment.

Perception of practice environment. The measurement of practice environment provides information linking nurse and patient outcomes (Lake, 2002). Job satisfaction, however, is likely to be associated with elements of the practice environment (Porter, Steers, Mowday, & Boulian, 1974), such as the type of work, tasks, degree of empowerment, and relationships with colleagues and immediate supervisors (Lake, 2002; Aiken & Patrician, 2000; Shore, Newton, & Thornton III, 1990). Thus, measuring nurses' perceptions of their practice environment is crucial to our understanding of nurses' job satisfaction and intention to leave current job (Aiken & Patrician, 2000; Estabrooks et al., 2002; Lake, 2002). In this study, therefore, the investigator uses perception of practice environment as a synonymous term with job satisfaction when examining its relationships with other variables in the proposed study model.

Organizational commitment. The second attitudinal measure, organizational commitment, has been consistently regarded as an important concept for understanding the work behaviors of employees in an organization (Mowday, Steers, & Porter, 1979;

Morrow, 1993; Meyer & Allen, 1997). Porter and colleagues (1974) defined organizational commitment as a global attitude, one that reflects the relative strength of the individual's attitude toward a particular organization and the degree that the individual identifies with and becomes involved in the organization. This type of commitment seems to be a stabilizing force in an organization in that it supports workers' decisions to remain with an organization when expectancy or equity conditions are not met (DeCoutis & Summers, 1987; Meyer & Allen, 1997).

Many researchers have proposed that job satisfaction is an attitudinal antecedent of organizational commitment or that it is at least a constituent of organizational commitment (Shore et al., 1990; Bateman & Strasser, 1984; Steers, 1977; Porter et al., 1974). Thus, job satisfaction is viewed as an intervening variable mediating personal characteristics and organizational commitment (Lum et al., 1998). Organizational commitment, however, is thought to be strongly linked to intention to leave the job (Lum et al., 1998; Shore et al., 1990; Porter et al., 1974).

The Decisional Perspective

From a decisional perspective, the term "intention to leave" refers to the individual's perception or opinions about the possibility of voluntarily leaving the present job (Hinshaw & Atwood, 1985). Fishbein (1979) pointed out that an individual's intention to perform a behavior is a decision point of action. Researchers have shown that intention to leave is an important indicator of employees' subsequent turnover behaviors since it immediately precedes the actual act of leaving (Fishbein, 1979; Price & Mueller, 1981; Randall, 1990; Mobley, Horner, & Hollingsworth, 1978). A predictor of intention

to leave, one more powerful than job satisfaction according to some research, is organizational commitment (Mowday et al., 1979; Aryee et al., 1991; Brierley, 1996; Fang, 2001; Kacmar, Carlson, & Brymer, 1999; Tett & Meyer, 1993; Shore et al., 1990; Buchko, Weinzimmer, & Sergeyev, 1998). Organizational commitment has been proposed as being strongly linked to turnover through intention to leave (Randall, 1990; Gregson, 1992). Some researchers, nevertheless, continue to point out that job satisfaction is an important predictor of intention to leave (Pooyan, Eberhardt, & Szigeti, 1990; Cavanagh & Coffin, 1992; Shields & Ward, 2001**)**.

Assumptions

The following assumptions are applied to the current study.

1. Asian nurses who claim to have their basic nursing education from those defined Far East countries that are regarded as a culturally homogeneous group, will have similar cultural orientation that can be identified as collectivism.
2. Any cultural group is mixed with portions of collectivist and individualist orientations, though they belong to a specific culture.
3. Asian nurses, who are from collectivist cultures, may have beliefs, values, and needs regarding nursing professional practice distinctly different from those in Western cultures i.e. the U.S.
4. Asian nurses, with their different beliefs, values, and needs, bring different attitudes to their job and employing organization in the U.S. These attitudes may vary based on acculturation, i.e. time spent in US.
5. Asian nurses are able to accurately evaluate their cultural orientation, their attitudes

toward job and their commitment to their employing organization, and the possibility that they would intend to leave their current job in the U.S.

Limitations

The limitations of this study are described below:

1. Because of the non-random selection of subjects, the results of this study are generalizable only to a segment of the population of Asian nurses working in the U.S.
2. Selective ethnic groups represent only selected groups of Asian nurses.
3. This study employs a cross-sectional and descriptive research design that provides only a snapshot of Asian nurses. The study cannot ensure that the results would remain the same over time.

Chapter 2: Review of Literature

Chapter 1 discusses the importance of understanding the effects of employment on nurses who are from diverse cultures, especially Asian cultures, and currently working in the U.S. Of particular importance are three measures: perception of their practice environment, commitment to their organization, and how those two measures relate to a third, namely, intention to leave their job. This chapter is a review of the research into those three topics. The research questions guide the review, which in turn provides the research framework. In addition, the review focuses on research about a collectivist orientation. To the degree that studies of Asian nurses or nurses in general are rare, the review also takes into account collectivist-oriented studies in other profession fields.

The main concepts of the study: cultural orientation (collectivist orientation versus individualist orientation), practice environment, organizational commitment, and intention to leave are described first, followed by a review of the relationships among collectivist orientation, perception of practice environment, organizational commitment, and intention to leave. The mediating role of organizational commitment between perception of practice environment and intention to leave will also be reviewed. Each section of the review of the literature concludes with a summary or critique of the studies in that section.

In May 2006 a search of the following scientific databases was performed for the literature review: CINAHL, Psychology and Behavioral Sciences Collection, MEDLINE, ISI, Business Source Premier, Business Source Complete, and PsycINFO. Although the

literature review resulted in numerous citations, a total of 48 research articles that are focused on credible research findings were identified and critically reviewed in this chapter.

Cultural Orientation: Collectivist vs. Individualist Orientation

From the standpoint of anthropology, people are immersed in a culture from the time they are born to the time they die. As a result, people can be seen as products of their cultures. Whereas the power of culture is diffused and latent, it is nevertheless a constant and effective force in shaping human lives. The power of culture is especially evident in the values assumed and the behaviors adopted. Many social scientists have pored over a definition of culture. Their definitions, while different in the details, have common themes. In most definitions, for instance, culture is perceived as an environment that represents a collective programming of the collective mind (Hofstede, 1980; Leininger, 1978; Triandis, 1995). As a result of this, people within a culture share similar beliefs, values, attitudes, and behaviors. Using symbols as the primary medium of transmission, each generation passes those beliefs, values, and behaviors to the next. Likewise, Triandis (2001) proposes culture a composite of shared standard operating procedures, unstated assumptions, tools, norms, values, and habits that determine how members within the culture sample their environment. Therefore, the term culture could be summarized as "patterns of learned behaviors and values which are shared among members of a designated group and are usually transmitted to others of their group through time" (Leininger, 1978, p. 60).

According to the definition of culture above, differences among cultures stem

largely from differences in language, time, and place (Triandis, 1994). Most significantly, cultures have both stabilizing and dynamic effects. For example, people living in the same society have ready-made solutions to many of their life problems, and cultures provide rules for social intercourse that permit individuals to live peaceably together (Leininger, 1978). Cultural values can affect the attitudes of individuals toward certain behaviors, because values are conceptions of what is good, right, and desirable in a society and that guide people in their responses to various situations (Schwartz, 1999; Hofstede, 1980).

Although many scholars have attempted to define it, culture remains an elusive construct. One way to understand how cultures might relate to social psychological phenomena may be to identify dimensions by which cultures differ from one another. One of the most promising of such dimensions is the individualism-collectivism dichotomy (Triandis, Bontempo, Villareal, Asai, & Lucca, 1988; Triandis, McCusker, & Hui, 1990).

Attributes of Individualism and Collectivism

Individualism and collectivism are the most investigated cultural syndromes, but each consists of other, more basic cultural syndromes (Wasti, 2003b). A cultural syndrome is a pattern characterized by "shared beliefs, attitudes, norms, roles, and values that are organized around a theme and that can be found in certain geographic regions during a particular historic period" (Triandis, 1995, p. 43). Cultural individualism and collectivism have four independent measures: concepts of self, personal versus communal goals, cognitions, and relationships (Triandis, 1995; Triandis et al., 1988).

Each is defined in the following paragraphs:

Self. An essential difference between individualist and collectivist cultures lies in the ways the two cultures regard the concept of self. In individualism, the definition of self is independence; in collectivism, self means interdependence. For example, in individualistic cultures, persons who amass personal fortunes and power are often admired. Persons in collectivist cultures tend to share resources with other members and comply with the norms of the group.

Personal and communal goals. In individualist cultures, personal and group goals are rarely consistent, with personal goals having the priority. In collectivist cultures, one's personal goals and the goals one has for the group are usually closely aligned. In other words, individuals subordinate their personal goals to the goals of the group.

Cognitions. In individualist culture, the focus of cognition is on personal attitudes, needs and rights, and contracts that enforce social behavior. In collectivist cultures, the focus of cognition is on norms, obligations, and duties that guide much of social behavior.

Relationships to groups. In individualist cultures, individuals will often drop out of their groups if membership no longer helps them meet personal goals. In collectivist cultures, individuals have a high regard for relationships. As a result, memberships of groups are more stable, because individuals are reluctant to terminate relationships even when those relationships offer little advantage to an individual.

Definition of Collectivism and Individualism

As the above contrasts suggest, collectivism and individualism are at opposite ends

of a continuum.

Collectivism. Triandis (1995, p. 6) proposed that collectivism is a social pattern associated with closely linked individuals who see themselves as parts of one or more groups. Such groups may be family, co-workers, or nation. A more specific definition states that collectivism is characterized by: "(1) emphasis on the views, needs, and goals of the ingroup rather than on the self, (2) emphasis on behavior determined by social norms and duties rather than by pleasure or personal advantage, (3) common beliefs that are shared with the ingroup, and (4) willingness to cooperate with ingroup members."

Individualism. The definition of individualism is the opposite of that of collectivism. Individualism is a social pattern associated with loosely linked individuals who: "(1) view themselves as independent of collectives, (2) are primarily motivated by their own preferences, needs, rights, and the contracts they have established with others, (3) give priority to their personal goals over the goals of others, and (4) emphasize rational analyses of the advantages and disadvantages of associating with others" (Triandis, 1995, p. 2).

Geographic Distribution of Collectivism and Individualism

Triandis (1995) proposed to equate country with culture. Indeed, each country has its unique culture; yet, each country contains several subcultures. Clearly, however, geographic location is one of the important factors in distinguishing the difference between one culture and another (Triandis, 1994). Most cultural groups are found in regions with geographical proximity, where the population has a shared history and religion and where similar values and norms have taken hold (Schwartz, 2004; Liu, Borg,

& Spector, 2004). Many cultural anthropologists have divided the world into distinct cultural regions, depending on the research methods and the results of their investigations. Quite obviously, however, similar cultural manifestations can be observed in the Asian countries of the Far East, such as China, Hong Kong, Korea, India, Indonesia, Japan, Malaysia, the Philippines, Singapore, Taiwan, Thailand, and Vietnam. The populations of these countries share values and other cultural aspects that mark them as collectivist. In contrast, countries located in English-speaking countries and West Europe, such as the United States, the United Kingdom, Canada, Australia, New Zealand, France, Germany, Italy, the Netherlands, Spain, and Switzerland, represent individualist cultures (Schwartz & Bardi, 1997; Triandis, 1995; Schwartz & Ros, 1995; Hofstede, 1991).

Cultures have been measured from two perspectives: cross-culture (or national level) and within-culture (or individual level). Cross-cultural studies conduct observations across multiple cultures. Within-cultural studies conduct observations of populations or groups within a single society (Triandis, 1995; Triandis et al., 1988). A within-culture study, however, may focus on individuals who have different degrees of collectivist versus individualist orientations, even though they all belong to a specific culture. Those differences suggest that a variance may be found even within a single culture, and such variances could predict and explain changes in dependent variables of interest (Triandis et al., 1988; Triandis, 1995). This investigator, moreover, agrees with research stating that the orientation (collectivist versus individualist) of a culture affects the collectivist orientation of individuals within the culture through the pressures of social norms during their socialization processes (Wang et al., 2002). Researchers, moreover,

should take those pressures to conform to a cultural orientation into account when they analyze the results of cultural research. This investigation, therefore, focuses on the collectivist orientation at the level of the individual.

When studying the influence of culture, some authors propose that the fundamental differences between individualism and collectivism are expressed in the postulates of collectivism (Gerganov, Dilova, Petkova, & Paspalanova, 1996). Triandis et al. (1990) state further that "collectivism can take a very different form in different parts of the world." Therefore, in this study, the investigator will examine the relationships among collectivist culture, Asian nurses' attitudes toward their job and organization, and their intention to leave current job in an individualist culture.

Practice Environment

The term practice environment is commonly used in nursing and was first used in the description of organizational characteristics common to the Magnet hospitals (McClure, Poulin, Sovie, & Wandelt, 1983). Later, several researchers defined practice environment concretely. Hoffart and Woods (1996) defined the professional nurse practice environment as "a system that supports registered nurse control over the delivery of nursing care and the environment in which care is delivered" (p. 354). Sleutel (2000) also defined the term of practice environment as "a set of concrete or abstract psychological features, such as job characteristics, autonomy, and promotion opportunities perceived by job incumbents who compare these perceptions against a set of standards, values, or needs" (p. 55). Recently, Lake (2002) defined nursing practice environment as "the organizational characteristics of a work setting that facilitate or

constrain professional nursing practice" (p. 178). In her view, practice environment provides information that is suitable for use with outcome research models, linking nursing practice environment with both nurse and patient outcomes (Lake, 2002).

Kramer and Hafner (1989) developed a Nursing Work Index (NWI) based on the concept of practice environment, containing an all inclusive list of factors about nurses' job satisfaction and quality nursing care. This instrument includes three measured components: nurse autonomy, control over the practice environment, and relationships with physicians. Early researchers used the NWI to compare job satisfaction among nurses working in Magnet and Non-Magnet hospitals (Kramer & Schmalenberg, 1991). Some researchers used the NWI to measure the organizational traits of hospitals (Aiken, Sloane, & Lake, 1997). Yoder (1995) reported that the Nursing Work Index could be used to measure not only job satisfaction but also hospital environments in which nurses work. In addition, one meta-analytic study showed that work content and work environment variables are strongly related to nurses' job satisfaction (Irvine & Evans, 1995).

Further studies based on the NWI demonstrated that evaluations of practice environment have been used as indicators of the employees' job satisfaction. Researchers used the revised NWI (NWI-R) to examine staff nurse burnout, perception of the practice environment, and job satisfaction (Aiken, Havens, & Sloane, 2000; Estabrooks et al., 2002). Findings revealed that nurses working in the Magnet hospitals have higher perceived job satisfaction, and more positive perceptions of practice environment. Laschinger, Shamian, and Thomson (2001) found that a Magnet work environment had positive relationships with job satisfaction, perception of quality of care, and trust in

management. Upenieks (2002, 2003) assessed differences in job satisfaction of nurses in Magnet and NonMagnet hospitals. Findings supported a strong relationship between job satisfaction and attributes commonly associated with a Magnet hospital environment such as autonomy, control over practice, positive nurse-physician relationships, and work empowerment.

To have a better understanding of practice environment, Lake (2002) re-conducted a factor analysis on the Nursing Work Index (NWI), that was developed to measure job satisfaction, and revealed different attributes of Magnet hospital from those in the original NWI development report (Kramer & Hafner, 1989). Lake's confirmed five characteristics of Magnet hospital were nurse participation in hospital affairs; nursing foundation for quality of care; nurse manager ability, leadership, and support of nurses; staffing and resource adequacy; and collegial nurse-physician relations. Lake named this new scale as the Practice Environment Scale (PES-NWI) and hypothesized that by understanding nurses' perception about their practice environment, nurse outcomes could be understood more. However, currently, not many researchers used the PES-NWI in their studies. Leiter and Laschinger (2006) examined the relationship between nursing practice environment and nurses' quality of worklife using the PES-NWI. Their results showed that practice environment was positively related to nurses' quality of worklife, which included emotional exhaustion, depersonalization, and personal accomplishment. This study has provided evidence in Lake's hypothesis that nurse practice environment links to nurse outcomes, especially satisfaction.

According to the above literature review, generally, the NWI and PES-NWI have

been used frequently in measuring nurses' perceptions of practice environment, i.e. job satisfaction, organizational traits of hospitals, and quality of patient care. In this study, the author will use Lake's (2002) PES-NWI to measure nurses' perceptions of their practice environment. Since many items in PES-NWI and items in various job satisfaction instruments are quite similar, the investigator will use the PES-NWI to measure nurses' perceptions of practice environment in this study; however, others have previously used the term job satisfaction.

Organizational Commitment

Organizational commitment has several theoretical definitions, and the literature of organizational behavior provides further insight on the construct. According to Alexander & Tyree (1996), **c**ommitment is a high-level psychological and social attachment to someone or something in a social endeavor. Commitment encompasses expectations of personal benefits, elements of moral character, and investments of devotion and dedication (Etzioni, 1975). Organizational commitment reflects an individual's relative strength of identification and involvement with a particular organization (Porter et al., 1974) and also one's persistence in making sacrifices for the good of the organization (Weiner, 1982). Therefore, once commitment exists, it empowers individuals and stabilizes their behavior under different circumstances. Porter et al. (1974) state that organizational commitment entails a belief in and acceptance of organizational goals and values, a willingness to exert efforts on behalf of the organization, and a strong desire to maintain membership in the organization. Organizational commitment is a general affective stance toward the organization as a whole, and it develops slowly but

consistently over time (Mowday et al., 1979).

Commitment has at least three theoretical realizations: affective, normative, and continuance or calculative. The affective and normative commitments are jointly called attitudinal commitment, a term used interchangeably with organizational commitment (Kong et al., 1994). These three types of commitment are described below.

Attitudinal Commitment (or Organizational Commitment)

Affective commitment. Affective commitment is an individual's attachment to, identification with, and involvement in an organization. The degree of such commitment depends on the strength of positive feelings toward the organization and willingness to increase an emotional bond to that organization. Affective commitment appears as the employee begins to internalize and identify with the organization's goals (Etzioni, 1975; Mowday et al., 1979; Manion, 2004). This kind of commitment is often a result of events, actions, and policies by which the organization creates positive emotional connections with members of the work group. Employees with a strong affective commitment work in the organization because they want to (Meyer & Allen, 1991), and they are intrinsically willing to exert great effort on behalf of the organization.

Affective commitment among employees improves the operational aspects of the organization. Such improvements include greater job involvement and better job performance. In addition, behaviors of good citizenship become more widespread, turnover rates fall, and employees have more opportunities to develop leadership skills (Steers, 1977; Mowday et al., 1982; Meyer & Allen, 1991; Allen & Meyer, 1996).

Normative commitment. Normative commitment arises from an individuals' sense

of obligation to the organization and reflects the degree that their values and beliefs conform to those of the organization (Allen & Meyer, 1996; Weiner, 1982; Manion, 2004). When goals or values are shared, the individuals are more likely to regard obedience to the authority and norms of the group as appropriate; and, is less likely to challenge or deviate from organizational wishes. Employees who have strong normative commitment to an organization stay with the organization because they believe they ought to do so (Meyer & Allen, 1997).

Continuance Commitment (or Calculative Commitment)

This form of commitment, which derives from socioeconomic factors (Swailes, 2002), reflects the employees' awareness of the costs associated with staying with or leaving an organization. Continuance commitment emerges as employees accrue incentives to stay on the job in return for their contributions to the organization (Etzioni, 1975). Employees who have strong continuance commitment to an organization stay with the organization because they believe they have to do so, and may perform only as required to keep their jobs (Meyer & Allen, 1997). No relationship has been found between continuance commitment and performance (Meyer & Allen, 1991; Allen & Meyer, 1996).

Although these are three dimensions of commitment, the concept of attitudinal or organizational commitment is more useful and more sound as a basis for use in this study. Armitage and Christian (2003) pointed out that historically, attitudes are assumed to have the function of guiding people's behaviors. Moreover, the stronger the attitudes are, the more powerful are the predictions of people's behavior (Armitage & Christian, 2003).

Hence, affective and normative commitment taken together as attitudinal commitment (or equivalent to organizational commitment) has frequently been used as a predictor of turnover intention or turnover behavior (Mowday et al., 1979; Porter et al., 1974).

Intention to Leave

The concept of intention to leave should be differentiated from turnover. Turnover refers to the act of nurses actually leaving an organization, whereas intention to leave refers to individuals' perceptions toward leaving rather than their actual behavior of leaving (Price & Mueller, 1981). Hinshaw and Atwood (1985) defined intention to leave as individuals' perceptions or opinions of the possibility of voluntarily ceasing their employment in the current position. The term of intention to leave is related to and is an important predictor of turnover behavior (Price & Mueller, 1981; Somers, 1995). One study of hospital employees showed that the measures for thinking of quitting, intention to leave, and turnover were moderately to strongly correlated (Mobley et al., 1978). Many researchers proposed that the single best predictor for turnover is the intention to leave (Randall, 1990; Shore et al., 1990; Mowday, Koberg, & McArthur, 1984). The term intention, however, provides a better translation because it connotes a person's perception toward leaving (Mobley, Griffeth, Hand, & Meglino, 1979). Such perceptions, when known early enough, can alert administrators to take measures to discourage persons from leaving their jobs.

Collectivist Orientation and Perception of Practice Environment

In any search of the current literature on the management of a culturally diverse workforce, much of the information focuses on issues relating to cross-cultural work

interactions. For that reason, much of the research is documented in international business, management, and cross-cultural psychology literature. Although the healthcare workforce has been rapidly diversifying, there is minimal research focused on the perceptions of culturally diverse healthcare providers toward their practice environment and organizations, and there is even less research targeting Asian nurses specifically. However, the variable of practice environment is often used to measure nurses' job satisfaction or is regarded as an indicator of job satisfaction. Thus, the following sections will regard perception of practice environment as a synonymous concept with job satisfaction when examining the relationships between perception of practice environment and other variables in this study.

Research Findings

A total of nine studies discuss the relationships between collectivist orientation and perception of practice environment or job satisfaction and will be reviewed and critiqued next. Of these studies, all of which relate to fields in professional nursing, two are qualitative studies (Yi & Jezewski, 2000; Spangler, 2001), and six are quantitative studies. Discussions of the studies are organized by related topics. One discusses Korean nurses working in U.S. hospitals (Yi & Jezewski, 2000). Three explore the practicing situation of Filipino nurses in the USA (Spangler, 2001; Berg, Rodrigurz, Kading, & Guzman, 2004; Asperilla, 1976). Two simply illustrated the relationship between the variables of perception of practice environment and job satisfaction (Adams & Bond, 2000; Tmmulty, Jernigan, & Kohut, 1994), and three compare the differences between Asian and Western nurses in their job attitudes and practice values (Chiu & Kosinski, 1999; Pizer, Collard,

James, & Bonaparte, 1992; Flynn & Aiken, 2002).

Accordingly, the first and foremost problem for Asian nurses might be to "adapt to the hospital environment in host countries," which means they must adapt to both the explicit and implicit practice environment of these hospitals. Yi and Jezewski (2000) used a qualitative approach based on grounded theory to study Korean nurses' adjustment to hospitals in the USA. The authors interviewed twelve Korean nurses whose average age was 43 years (ranging from 25 to 57). Their average time spent in the USA was 15 years, ranging from 1 to 23 years. The results of the data analysis revealed that "adjustment to USA hospitals" was the basic social-psychological process. Five categories composed the process: "(1) relieving psychological stress, (2) overcoming the language barrier, (3) accepting USA nursing practice, (4) adopting the styles of USA problem-solving strategies, and (5) adopting the styles of USA interpersonal relationships" (p. 724). The Korean nurses required about 10 years to go through the process, and only then could they really become truly involved in American hospital environment.

During their investigation, Yi and Jezewski observed that Korean nurses faced a series of obstacles pertaining to their interpersonal relationships with colleagues and the support they received from colleagues and nursing unit superiors. The Koreans found, for example, that interpersonal relationships in the U.S. were individualistically oriented, which contrasted with the Korean collectivist-oriented values that stressed group cohesion. Another serious difficulty was the lack of sufficient support they needed in the hospital practice environment. They would need such support from their nursing colleagues especially in situations where there was a language barrier or to resolve

different perspectives on nursing practice. They would need support from the nursing unit superiors to help them feel deeply appreciated, because in the Korean culture, people often regard their superiors as mentors. Over time, however, the Korean nurses became accustomed into their hospital practice environment and began to feel more satisfied with their jobs.

Spangler (2001) conducted a qualitative study regarding culture and healthcare among Filipino and Anglo-American nurses in a hospital context in the U.S. This study took place in a 200-bed acute-care hospital located in the Northeast. The informants interviewed were 22 Anglo-Americans and 26 Filipinos. Two universal themes were revealed in the interviews with the Filipino informants. They cited their inability to provide ideal-quality professional nursing care because of a nursing shortage, which caused heavy workloads, and institutional policies that strongly influenced their nursing practice. Filipino informants expressed that they felt frustrated because "they did not have sufficient time to spend to talk with patients, to get to know patients more, to be connected, to show concerns, or to do little extra things for the patients" (p. 140). All the factors mentioned by the Filipino nurses were important in that the factors related to the provision of high-quality patient care. In addition, the study revealed a prevailing policy in which medical and institutional rational-legal requirements dominated nursing practice. For example, the first priority of nursing practice was to implement the medical orders of physicians. Bureaucratic regulations restricted nurses to two activities: taking and following orders, and then reporting their actions to their immediate superiors. They had to adhere to the set policies and procedures, even though they might have felt, from their

own cultural perspectives, that those policies and procedures were not ideally suited to the patients' needs. Those findings implied that the hospital culture and policies had a powerful impact on the Filipino nurses, especially because it conflicted with their own feelings about the proper nursing practice of caregiving; nevertheless, but they could only accept that culture and those policies. In this study, however, Spangler did not give the demographic data of the participants; therefore, such data could not be related to key factors. For that reason, it was not possible to find the links between participants' age and tenure in U.S. hospitals, on one hand, and the participants' ability to resolve their conflicts with their practice environment, on the other hand.

These two studies just described reveal certain factors that Asian nurses must deal with when practicing in U.S. hospitals. Those factors include interpersonal relationships, support from colleagues and nursing unit superiors, different cultural perspectives in the quality of patient care, nurse-physician relationships, and conflicts with hospital policies regarding the care of patients. Those factors are also supported by Lake's (2002) research on PES-NWI. Her findings show that, for hospital nurses, collegial relationships with doctors or other nurses, perceived workload, quality of patient care and managerial ability are all influential and predictive factors of nurses' perceptions of their practice environment.

Little attention has been paid to the Asian nurses' perceptions of their practice environment. Berg, Rodrigurz, Kading, and Guzman (2004) surveyed Filipino nurses' demographic data and job satisfaction. This research was a nonexperimental descriptive study using a convenience sample. A total of 327 Filipino nurses were recruited from 27

local chapters of the Philippine Nurses Association of America (PNAA). The instrument used for the study was specifically designed by PNAA nurses. The results about job satisfaction during the last year showed that 47.2% of Filipino nurses felt good about their jobs, 44% of them felt very good, and 7.9% and 0.3% of them felt neutral and poor, respectively. The most common short-answer responses to the job satisfaction question as to what one thing they felt would improve their job satisfaction were higher pay (64.3%), adequate staffing (14.1%), and support from management (11.3%). Other responses were leadership, supervision, and opportunities for advancement. The study also found that job satisfaction was negatively associated with the number of years from retirement (r=-.16, p<.05), and positively associated with years of practice (χ^2=9.3, p<.05), and opportunities for advancement (χ^2=12.7, p<.001).

The researchers reported that a high number of subjects in this study would choose to be nurses again, and they would encourage friends and family members to enter the profession. Finally, the researchers commented that the reasons for the high job satisfaction among Filipino nurses were their background and earlier education in their native country. Thus, the Filipino culture played an influential role in this positive job attitude, which has been connected with greater job satisfaction.

The results from this research were consistent with the results from Asperilla (1976). Asperilla surveyed Filipino nurses employed in four New York City hospitals to assess their satisfaction with facilities, position and work assignment, salaries and benefits, human relations, and relationships with the health team. Overall, 51% of the subjects were more satisfied than dissatisfied with their jobs. This study also found that

salary satisfaction and supportive relationships with superiors were important predictors of overall job satisfaction.

Adams and Bond (2000) studied the relationship between hospital nurses' job satisfaction and individual and organizational characteristics among a nationally representative sample of 834 nurses in England. Their instrument was called the Ward Organizational Features Scales (WOFS). Multiple regression statistics and Pearson product-moment correlation were used to analyze the data. In the first stage, the authors explored relationships between individual nurse characteristics and job satisfaction, and then they examined the relationships between nurses' job satisfaction and their perceptions of other aspects of the ward organizational environment. Finally, they used multiple regression analysis to assess the cumulative effects of the ward organizational features on nurses' job satisfaction.

The correlations reveal that the highest correlations found were between job satisfaction and cohesion of the ward nursing team (r=.51, p<0.001), staff organization (including items of staffing and workload) (r=.46, p<0.001), the level of professional practice achieved within the ward (r=.46, p<0.001), and collaboration with medical staff (r=.41, p<0.001). According to the multiple regression analysis, the significant predictors of nurses' job satisfaction were cohesion of the ward nursing team (β=.26), staff organization (β=.20), collaboration with medical staff (β=.20), and level of professional practice achieved within the ward (β=.11), factors identified as critical in PES-NWI (Lake, 2002).

Tmmulty, Jernigan, and Kohut (1994) examined the impact of perceived work

environment on job satisfaction of hospital staff nurses. A total of 159 subjects were drawn from a multi-site private hospital located in the southeastern metropolitan area of the U.S. The Work Environment Scale (WES, Abraham & Foley, 1984) and the Index of Work Satisfaction (IWS, Stamps & Piedmont, 1986) were applied to measure the variables of perceived practice environment and job satisfaction. The WES contained three categories of work environment measures: relationship, personal growth, and system. The measures for job satisfaction included satisfaction with pay, growth, status, interaction, task, policies, and autonomy.

ANOVA statistical procedures were used to analyze data. The results showed that there were significant differences in reported job satisfaction between high-satisfaction and low-satisfaction nurses on the basis of their perceptions of the nursing practice environment. Highly satisfied nurses were significantly more positive in their perceptions of the overall work environment than the unsatisfied nurses (F=67.13, p<.01). The relationship (F=26.95, p<.01) and system (F=10.73, p<.01) factors of the work environment contributed the most to the nurses' job satisfaction, such as peer cohesion, referred to as friendly and supportive peers, and supervisor support.

Nurses who were collectivist in origin did not always have higher job satisfaction than nurses who were individualists. A different finding was revealed by Chiu and Kosinski (1999), who compared differences between Asian nurses and nurses in Western countries. They hypothesized that nurses in Hong Kong (HK) and Singapore would be more collectivist, whereas nurses in the U.S. and Australia would be more individualist. In addition, individualists would be more satisfied with their jobs and would have less

work strain. A total of 315 Asian nurses (119 from Singapore and 196 from H.K.) and 311 Western nurses (130 from the U.S. and 181 from the Australia) participated in the study. The Chinese Value Survey (CVS, Chiu & Kosinski, 1994) was used as a tool for discriminating between collectivists and individualists. The *t*-test, was employed to analyze data. The results showed that, compared to Asian nurses, Western nurses scored higher on positive affectivity (t=4.92, p<.05) and job satisfaction (t=6.81, p<.05) and lower on Confucian work dynamism (t=-19.93, p<.05), moral discipline (t=-11.62, p<.05), and work strain (t=-8.23, p<.01). However, nursing practice environment in HK, Singapore, U.S., and Australia were not the same, a direct comparison of variables without controlling for variables of practice environment might not be appropriate.

Pizer, Collard, James, and Bonaparte (1992) conducted a study to compare the differences in job satisfaction between foreign and U.S.-educated nurses. A total of 857 subjects (322 foreign-educated nurses and 535 U.S-educated nurses), drawn from six acute-care hospitals in the New York City Health and Hospital Cooperation (HHC), were investigated. All of the foreign-educated nurses were Filipino nurses, and the U.S.-educated nurses were all American nurses. The instrument developed by the authors contained questions regarding job satisfaction in three categories: quality of care, enjoyment of one's job, and time to do one's job. Chi-square analyses and *t*-tests were used to analyze categorical and continuous data. Results showed that foreign- and U.S.-educated nurses did not significantly differ in quality-of-care and time-to-do-one's-job categories (p>.05); yet, they significantly differed in enjoyment of one's job (p<.05), in which the U.S.-educated nurses had a higher mean score in the

enjoyment category, but the difference was small in this poorly controlled study.

There are two added critiques of these results. First, the design of the groups is imbalanced: 323 foreign-educated nurses versus 535 U.S.-educated nurses. Second, because the authors did not give the data for the standard deviations, the within-group variance cannot be known. When a design involves imbalanced groups, however, the results are subject to being biased. The bias affects the Type I and II error rates and power (Howell, 2002; Dancer, class notes, July, 2005; Keyes & Levy, 1997).

Flynn and Aiken (2002) compared the differences of nursing practice values between international nurses and U.S. nurses in U.S hospitals from a cultural perspective. A secondary data analysis was conducted with a total of 799 subjects collected in 1991 from 20 hospitals located in 11 U.S. cities. The subjects were 547 nurses U.S. (an individualist culture), 231 subjects classified as international nurses from various collectivist cultures, and 21 subjects classified as international nurses from various individualist cultures. The subjects from collectivist cultures came from regions like Africa, the Caribbean Islands, South America, and Asia. To measure nurses' satisfaction with their practice environment, the Nursing Work Index (the NWI, from Kramer & Hafner, 1989) was used to measure three factors: nurses' autonomy, control over their practice environment, and relationships with physicians. An ANOVA was used for the data analysis. The general results showed that there was no difference between international and U.S. nurses in their values of nursing practice environment (F=1.23, p>.05); however, the mean score in the nurses' autonomy subscale for international nurses from collectivist cultures was slightly less than that for U.S. nurses (F=3.74,

$p<.05$). These results were similar to Pizer et al.'s study (1992).

The Flynn and Aiken (2002) study raises two questions. First, the study design was severely imbalanced; there were 574, 231, and 21 nurses in the groups representing U.S., international collectivist cultures, and international individualist cultures, respectively. Therefore, the results may be statistically biased (Howell, 2002; Dancer, class notes, July, 2005; Keyes & Levy, 1997). Second, the international nurses from collectivist cultures came from regions of Africa, Caribbean Islands, South America, and Asia. The countries in a cultural group that are in geographical proximity, however, may share histories, languages, and religions, and they may have similar cultural values (Schwartz, 2004; Schwartz & Bardi, 1997; Schwartz & Ros, 1995), whereas this sharing does not apply to the countries in cultural groups that are geographically distant from each other. Therefore, in this study, nurses from collectivist-oriented countries that are widely separated might have a large variance of within-collectivist cultures. As a result, no statistical difference may appear between nurses from collectivist and individualist cultures.

Summary

From these review of the research, two major conclusions and critiques can be drawn. First, the PES-NWI is appropriate for measuring Asian nurses' perceptions of their practice environment in U.S. hospitals.

The three studies (Yi & Jezewski, 2000; Spangler, 2001; Berg et al., 2004) focused on the working situation of Asian nurses revealed that the first and foremost problem for Asian nurses was to adapt to the U.S. hospital practice environment. The common obstacles they faced in the practice environment related to interpersonal relationships

among nurse and other medical colleagues, support from colleagues and superiors, differences in cultural perspectives regarding the quality of patient care, adequate staffing, leadership style, and conflicts with hospital policies in respect to patient care. These factors were consistent with the research findings of Lake (2002) and Adams and Bond (2000), in which the subjects were drawn from Western countries. The major themes in the PES-NWI, that was developed by Lake (2002), include nurse participation in hospital affairs; nursing foundation for quality of care; nurse manager ability, leadership, and support of nurses; staffing and resource adequacy; and collegial nurse-physician relations.

Second, the PES-NWI is appropriate for measuring nurses' perceptions of practice environment: many indices of which equate with job satisfaction. In Adams and Bond's study (2000), the authors examined the relationships between nurses' job satisfaction and their perceptions of the ward practice environment. The results revealed a strong correlation between those two variables. Furthermore, job satisfaction could be measured through nurses' perception of their practice environment. These findings were supported by other studies reviewed in this section (Berg et al., 2004; Tmmulty et al., 1994). However, these results support Lake's (2002) viewpoint that practice environment provides information suitable for outcome research models linking the nursing practice environment to nurse outcomes—job satisfaction.

In addition, three studies (Berg et al., 2004; Yi & Jezewski, 2000; Asperilla, 1976) focused on Asian nurses' job satisfaction indicated that, over time, Asian nurses became generally satisfied to very satisfied with their current jobs. On the other hand, only one study (Chiu & Kosinski, 1999) showed that Asian nurses were not as satisfied as Western

nurses. Two other studies (Flynn & Aiken, 2002; Pizer et al., 1992) suggested that there were no differences in job satisfaction between Asian and Western nurses. The studies in Chiu & Kosinski (1999), Flynn and Aiken (2002), and Pizer et al. (1992), however, were subject to some criticism regarding research design and statistical flaws.

Collectivist Orientation and Organizational Commitment

According to the definitions already discussed, organizational commitment means that the individual identifies with the organization, has goals or values congruent with those of the particular organization, or believes that the organization will reward workers for their devotion and dedication. Given that definition, this investigator believes that collectivists are more likely to meet the conditions of organizational commitment than individualists. First, according to Triandis (1995), the essential difference between individualism and collectivism has to do with the concept of self. In collectivism, self is defined as interdependence; in individualism, it is defined as independence. A normative imperative of collectivists is to identify themselves as part of a social group, that is, to establish and maintain interdependence among individuals and to regard themselves as part of an encompassing social relationship (Markus & Kitayama, 1991). To collectivists, therefore, an employing organization is like any other important social group in that it provides collectivists with opportunities for social identity (Wang et al., 2002).

Second, one of the essential attributes of collectivism is that most collectivists regard their goals as being congruent with those of a particular group. In collectivist cultures, once individuals join and accept a social group, they subordinate their personal goals to the goals of that group. Such social groups are family, organization, community,

and nation (Triandis et al., 1988). Those characteristics meet one of the preconditions for affective and normative commitment mentioned previously, that is, the congruence of personal and organizational beliefs, values, and goals. Finally, some authors have proposed that the collectivists' high input to groups was found to be strongly associated with their expectations for desired outcomes from their groups; that is, collectivists invest their commitment and effort to a group in expectation of a certain degree of beneficial feedback from the group (Fijneman et al., 1996; Wang et al., 2002).

A logical conclusion from the literature is that there is a linkage between collectivism and organizational commitment. Individuals with collectivist orientation are more likely to have a positive view of commitment to their organizations when they perceive their organizations as their ingroups. However, little published research has examined the relationship between individuals' collectivist orientation and their organizational commitment among Asian people, especially when those individuals are nurses.

Research Findings

Four studies, two targeting the nursing profession and using qualitative methods (Spangler, 2001; McNeese-Smith, 2001) and two targeting non-nursing professionals and using quantitative methods (Wang et al., 2002; Al-Meer, 1989), have examined the relationship between cultural perspective and organizational commitment.

Spangler (2001) used a qualitative research method to explore the influences of culture on Filipino nurses' attitudes toward their jobs and work places in the U.S. The Filipino nurses expressed that they regarded their jobs as a duty, obligation, a matter of

conscience, and commitment. They felt guilty if they did not perform their jobs well. They would cooperate and adhere to the healthcare systems in which they practiced.

McNeese-Smith (2001) conducted a qualitative study to identify factors that built organizational commitment among nurses during a nursing shortage. The samples were drawn from a Los Angeles county hospital. A total of 30 participants were interviewed, with 24 Asian nurses and two each of Latino, Caucasian, and African American nurses. Findings from these interviews showed that there were three categories of factors: personal factors, job satisfaction, and cultural factors. Job satisfaction, in turn, includes opportunities for learning, a plan to retire from the organization, monetary benefit, quality of patient care, relationship with coworkers, and job security. The main theme for cultural factors was work values. The interviewees described "maybe having an Oriental work ethic; it is an attitude that you worked for the company until you died. If there's problems in the organization, you're part of the problem and you need to solve it" (p. 180). This description implied that the Filipino nurses felt a full commitment to their organizations and were willing to exert considerable effort for the benefit of those organizations.

Wang et al. (2002) conducted a quantitative study with 510 non-nurse subjects in China to test collectivist orientation as a meaningful predictor of affective organizational commitment. Predictors included demographic data, pay satisfaction, and collectivist orientation. The authors developed an instrument with 16 attitudinal items to measure organizational commitment, collectivist orientation, and pay satisfaction, and they applied a hierarchical regress analysis to the data. Organizational commitment was measured as the dependent variable, and all assumed predictors were the independent

variables. The results showed that all the control variables explained 23% of the variation in organizational commitment ($p<.01$), and collectivist orientation explained an additional 4% of the variance in organizational commitment ($p<.05$). In addition, there was a positive relationship between collectivist orientation and organizational commitment (regression coefficient=.21, $p<.01$).

Al-Meer (1989) compared levels of organizational commitment among employees from the Western, Asia, and Saudi Arabia who were working for organizations in Saudi Arabia. A total of 239 subjects in managerial and nonmanagerial jobs were drawn from companies in Saudi Arabia. The Organizational Commitment Questionnaire (Porter et al., 1974) was utilized to measure organizational commitment, and an ANOVA was used to analyze the data. The results suggested that the mean score of organizational commitment was 4.75 for Westerners, 5.16 for Asians, and 4.76 for Saudis. There were significant differences regarding the levels of organizational commitment between Westerners and Asians ($p<.05$) and between Asians and Saudis ($p<.01$). There was no significant difference between Westerners and Saudis. Generally, these results suggest that Asians have a significantly higher level of organizational commitment to their organizations than do those from the other regions.

Summary

The results from the two qualitative studies (Spangler, 2001; McNeese-Smith, 2001) give us a good understanding of the attitudes of Asian nurses toward their employing hospitals. In their cultural perspective, Asian nurses believe that it is natural to think that they are in the same boat with their employing organizations. This sense of common

purpose is a significant characteristic of organizational commitment and collectivist culture. One study (Al-Meer, 1989) concluded that Asians had a significantly higher level of organizational commitment to their organizations than the other two regions, the West and Saudi Arabia. Wang et al.'s study (2002) supported Al-Meer's conclusion, namely, that a collectivist culture is positively correlated to, and is a significant predictor of organizational commitment.

Perception of Practice Environment and Organizational Commitment

No research was located that includes both perception of practice environment and organizational commitment in a single study. Yet, practice (or work) environment has been considered as an important indicator and measure of employees' job satisfaction (Upenieks, 2003; Lake, 2002; Lambert, Hogan, & Barton, 2001; Aiken & Patricia, 2000; Kramer & Schmalenberg, 1991; Yoder, 1995; Kramer & Hafner, 1989). However, job satisfaction is often considered as an antecedent of organizational commitment (Aryee, Wyatt, & Min, 1991; Reichers, 1985; Bateman & Strasser, 1984). Other researchers (Porter et al., 1974) regard job satisfaction as a specific component of organizational commitment. In addition, Lynn and Redman (2005) view job satisfaction as focusing more on the interaction of people with their practice environment and conditions of employment. Based on the paucity of studies on relationships between perception of practice environment and organizational commitment, the following section uses job satisfaction as a synonymous concept with perception of practice environment when examining its relationship with organizational commitment.

Research Findings

A total of eight studies that focus on the relationship between job satisfaction and organizational commitment are reviewed next. Three studies are in the nursing field (Lok & Crawford, 2001; Knoop, 1995; Curry, Wakefiels, Price, & Mueller, 1986), and will be discussed first, followed by five studies on non-nursing professionals that will be presented by the year published or by topic. One of the nursing studies was conducted in Australia (Lok & Crawford, 2001). The studies on the non-nursing professionals were conducted in the U.S.

Lok and Crawford (2001) investigated relationships among organizational culture and ward culture, job satisfaction, and organizational commitment. A total of 251 nurses were recruited from seven hospitals in Australia. The Organizational Commitment Questionnaire (OCQ, Porter et al., 1974), Job Satisfaction Survey (JSS, Mueller & McClosky, 1990), Organizational Culture Index (OCI, Wallach, 1983), and Leader Behavior Description Questionnaire (LBDQ, Stogdill, 1974) were used to measure the organizational commitment, job satisfaction, organizational culture, and leadership style, respectively. Multiple regression was applied for the data analysis.

Results showed that ward culture (including the bureaucratic and the innovative cultures; β=.-.16, p<.05 and β=.34, p<.01, respectively), leadership style (β=.25, p<.01), and job satisfaction (β=.19, p<.01) significantly predicted organizational commitment. Although the results for this study did not indicate that job satisfaction, when compared to other variables, was the strongest predictor of organizational commitment, job satisfaction was still a significant antecedent of organizational commitment with a strong positive correlation.

Knoop (1995) examine the relationships among job satisfaction and organizational commitment for nurses. The participants were 171 nursing educators and registered nurses who were employed by 11 hospitals and 3 community colleges in the U.S. The OCQ (Porter et al., 1974), the Job Descriptive Index (JDI, Hatfield, Robinson, & Huseman, 1985), and a graphic scale (Kanungo, 1982) were used to measure organizational commitment, job satisfaction, and job involvement, respectively. Regression statistic techniques were used to analyze data. The results showed that job satisfaction was significantly and positively correlated to organizational commitment (r=.64, p<.001). Organizational commitment was positively correlated to job involvement (r=.38, p<.001). Job satisfaction explained 50% of the variation in organizational commitment.

Harrison and Hubbard (1998) implemented a study to explore the antecedents of organizational commitment among Mexican employees. A total of 100 employees were recruited from a U.S. firm in Mexico. The measured antecedents included job satisfaction, organizational characteristics, and work experiences. The OCQ (Porter et al., 1974), the Job Descriptive Index (JDI, Smith, Kendall, & Hulin, 1969), the Organizational Effectiveness Measure (Mott, 1972), and Managerial Behavior Survey (Yukl, 1981) were applied to measure the variables of organizational commitment, job characteristics, organizational effectiveness, and work experiences, respectively. The results from the regression analysis indicated that job satisfaction was the most significant factor that was positively correlated to organizational commitment (r= .52, p<.001; β=.50, p<.01) among all tested antecedents. In addition, these antecedent variables accounted for a significant

variation in commitment (adjusted R^2=.44, p<.001). Yet, job satisfaction was the best predictor, explaining 25.36% of the variation in organizational commitment, when compared to other predictors of organizational characteristics and work experiences.

To understand the relationships between predicting factors of job satisfaction and organizational commitment, Gaertner (1999) used meta-analytic structural equation modeling to analyze nine empirical studies. The total sample size for this analysis was 7040. The correlation coefficients were averaged and weighted by sample size, and they were computed and presented in this study. The results showed that job satisfaction not only strongly correlated to organizational commitment (r = .58) but could also predict it (path estimate equaled .54, p < .05).

Testa (2001) developed a conceptual model to examine the causal relationships among organizational commitment, job satisfaction, and effort in the service environment. Participants in this study were 425 subjects drawn from 24 departments of a cruise line and a food-service organization in the U.S. OCQ (Porter et al., 1974) and Cruise Line Job Satisfaction Question (CLJQ, Testa, Williams, & Pietrzak, 1998) were employed to measure organizational commitment and job satisfaction, respectively. A Structural Equation Modeling (SEM) analysis was used to test the proposed model in which job satisfaction (including satisfaction with supervisor and organization) was the independent variable, and organizational commitment mediated the effects of job satisfaction on service effort. Results showed that the proposed structural model fit well. Job satisfaction was positively correlated to organizational commitment (path coefficients=.84, p<.05), and likewise organizational commitment was positively correlated to service effort (path

coefficients=.47, p<.05). In the tested model, job satisfaction explained 70% of the variation in organizational commitment, and organizational commitment explained 22% of the variation in service effort.

Yoon and Thye (2002) proposed and tested a dual-process model of organizational commitment, job satisfaction, and organizational support. This proposed theoretical model showed that job characteristics and organizational-related variables jointly influenced the variables of job satisfaction and organizational support. Furthermore, job satisfaction and organizational support simultaneously mediated the effects of job characteristics and organizational characteristics on organizational commitment. The variables of job characteristics were variety, autonomy, workload, and pay. The organizational-related variables included communication, distributive justice, and procedural justice. Participating in this study were 2,443 subjects from two large electronic organizations in South Korea. The key measures were job satisfaction, organizational commitment, and organizational support, which were measured by the Job Satisfaction Scale (JSS, Brayfield & Rothe, 1951), OCQ (Porter et al., 1974), and a self-established questionnaire, respectively. Structural Equation Modeling procedures were used for the model test. The results indicated that the overall model accounted for 51% of the variation in organizational commitment. All job-characteristic variables and variables related to the organization accounted for 73% of the variation in organizational support and 50% in job satisfaction. For all exogenous variables, only pay was not significantly related to both job satisfaction (β=-.02, p>.05) and organizational support (β=-.04, p>.05). From the findings, apparently the proposed model with dual processes

fits well in that job satisfaction (β=.36, p<.001) and organizational support (β=.31, p<.001) jointly affected organizational commitment. Job satisfaction, however, was a stronger predictor for organizational commitment than organizational support.

Although many studies presented evidence for a causal relationship between job satisfaction and organizational commitment, some research did not support this. Curry et al. (1986) conducted a longitudinal study to examine the causal ordering of job satisfaction and organizational commitment. A total of 508 subjects including registered nurses and nursing managers (77%) and other hospital employees (23%) were drawn from a general hospital in a western state of the U.S. Researchers did not point out whether any Asian nurses were included in this study. There were 7 months between Time 1 of the study and Time 2. Structural Equation Modeling (SEM) was used to estimate outcomes of the model. Organizational commitment and job satisfaction were measured by the 9-item OCQ (Porter et al., 1974) and the JSS (Brayfield & Rothe, 1951), respectively. The exogenous factors, which included environmental characteristics, organizational structure, and employees' characteristics, served as predictors of both job satisfaction and organizational commitment. Results indicated that the influences of job satisfaction at Time 1 on commitment at Time 2 (β=-.002, p>.05) and of organizational commitment at Time 1 on job satisfaction at Time 2 (β=.035, p>.05) were not statistically significant, indicating no causal effect in either direction between job satisfaction and organizational commitment.

Farkas and Tetric (1989) tested a model developed by Williams and Hazer in a longitudinal study. The model included antecedents and consequences of job satisfaction

and organizational commitment in regard to turnover. The sample was 440 Navy recruits with a mean age of 19 and who were predominantly single and White. The recruits were asked to complete questionnaires at the end of their training and at 8 to 10 months and 20 to 21months after the beginning of training. The 9-item OCQ (Porter et al., 1974) was used to measure organizational commitment, and the researchers developed two questions about general satisfaction with the Navy to measure job satisfaction. The results of this model test showed that job satisfaction and organizational commitment were highly correlated at all three time points (r = .61 for Time 1, .70 for Time 2, and .78 for Time 3). Moreover, job satisfaction and organizational commitment had reciprocal causal relations. The study also found that turnover intention and organizational commitment were not static but developing processes.

Summary

Of the eight studies, that addressed both nursing and non-nursing professionals, the statistical results presented four different findings. First, six research studies, including two nursing studies (Lock & Crawford, 2001; Knoop, 1995), found that job satisfaction is either strongly correlated to or is a significant predictor of organizational commitment. Second, one study (Curry et al., 1986) found no causal effect in either direction between job satisfaction and organizational commitment. Third, one study (Farkas & Tetric, 1989) showed that job satisfaction and organizational commitment had reciprocal causal relations. It was also found that intention to leave and organizational commitment were not static but developing processes. The latter findings were congruent the viewpoint of organizational commitment proposed by Steers (1977) and Mowday et al. (1979) in

which organizational commitment was a predictor of intention to leave, and developed slowly but consistently. Four, the results in Yoon and Thye's (2002) study show that job satisfaction and organizational support jointly mediate the effects of organizational and job characteristics on organizational commitment without major difference of β value (β=.36 vs. β=.31, p<.001). That lack of any major difference may be because organizational support measures the same phenomenon as job satisfaction. This finding is consistent with the viewpoint of some authors who think that practice environment could be used interchangeably with organizational support and who regard practice environment as the indicator of job satisfaction (Tracey, Hinkin, Tannenbaum, & Mathieu, 2001). Some other common findings from these studies are the following.

The first concerns the sample sizes. No studies reported how the researchers decided the sample size needed. However, Most of these eight studies have sample size large enough (larger than 200) to yield stable results for most purposes (Hoyle, 1995), which are beneficial for the generalization of research findings (Burns & Grove, 2003; Polit & Beck, 2006).

The second concerns the instruments used in this study, there are a variety of questionnaires used for the measurement of job satisfaction: however, the major factors or indicators used to measure job satisfaction are leadership style, autonomy, justice, workload, colleague relationship, and pay. For the instruments measuring organizational commitment, seven out of eight studies—the exception being one used in a meta-analysis (Gaertner, 1999)—applied Porter et al.'s (1974) OCQ, which implies that this instrument is appropriate for measuring organizational commitment.

The third concerns data analysis. Three studies (Lok & Crawford, 2001; Knoop, 1995; Harrison & Hubbard, 1998) used regression analysis; the other five studies used either path analysis or structural equation modeling (SEM). Those techniques can provide more accurate predictions or explanations of the dependent variables (Huck, 2004).

Perception of Practice Environment and Intention to Leave

Studies have shown that Magnet hospitals, that provide a professional nursing practice environment, have been successful in attracting and retaining professional nurses (Kramer & Schmalenberg, 1988; Havens & Aiken, 1999). Having a professional and supportive work atmosphere is important in a nurse's decision to stay in a job (Klemm & Schreiber, 1992; Leveck & Jones, 1996). Thus, measuring the nursing practice environment might give us crucial information about nurses' job satisfaction and causes of nurses' intention to leave their current job. However, little research has located that directly investigates the relationship between perception of practice environment and intention to leave. Likewise, the following section examines the relationship between job satisfaction and intention to leave.

Research Findings

A total of six research articles are available that examine the relationship between job satisfaction in the practice environment and intention to leave. Four studies are in nursing profession (Lu et al., 2002; Shader et al., 2001; Cavanagh & Coffin, 1992; Larrabee et al., 2003) and two are in non-nursing field (Hellman, 1997; Lambert, Hogan, & Barton, 2001). One of the nursing studies was conducted in an Asian country, Taiwan (Lu et al., 2002). This section will review and critique all six studies. The studies in

nursing field will be presented first, followed by studies in non-nursing field.

Lu et al. (2002) investigated the relationships among intention to leave, professional commitment, and job satisfaction for nurses in Taiwan. The 2,197 nurses participating in this study were drawn randomly from the name lists provided by three Taiwan Nurses' Associations in the southern area of Taiwan. The variables of job satisfaction, professional commitment, and intention to leave were measured using instruments developed by the authors. There were two variables measured for intention to leave: intention to leave the organization and intention to leave the profession. The Pearson product-moment correlation was used to analyze the data, and the results revealed that nurses' job satisfaction was significantly and negatively correlated to intention to leave both the organization (r=-.48, p<.01) and the profession (r=-.37, p<.01). Job satisfaction, however, had the stronger correlation with intention to leave the organization than intention to leave the profession.

Shader et al. (2001) conducted a study to identify factors influencing job satisfaction and anticipated turnover for nurses in an academic medical center. A sample of 246 nurses (5 nurse managers and 241 staff nurses) was drawn from a 908-bed university hospital in the southeast region of the U.S. Nurses' job satisfaction was measured by the Index of Work Satisfaction (IWS), which included six subscales: pay, autonomy, task requirements, organizational policies, interaction and professional status. The intention-to-leave variable was measured by the Anticipated Turnover Scale (ATS, Hinshaw & Atwood, 1982). The other major influencing factors, including weekend overtime, nurse job stress, and group cohesion, were treated as the antecedents of job

satisfaction and intention to leave. Results from the Pearson correlation showed that these major influencing factors were all significantly correlated to job satisfaction and intention to leave. The best-fit model developed from this study explained 31% of the variation in intention to leave, including the variables of job satisfaction (β=-.35), weekend overtime (β=.27), nurse job stress (β=.16), and group cohesion (β=-.13). Obviously, nurses' job satisfaction had the strongest negative correlation with the intention-to-leave variable.

Cavanagh and Coffin (1992) modified and tested a model of nursing turnover suggested by Price and Mueller. A total of 221 nurses from U.S. hospitals on the West Coast were involved in this model test. The instruments used for job satisfaction, intention to leave, and turnover behavior were based on Price and Mueller's work (1981). The EQS statistics program was used to estimate the proposed model. Results showed that a total of six variables had statistically significant effects on job satisfaction. Those variables include participation (path coefficients= .245, p<.05), routine and autonomy (path coefficients=.235, p<.05), promotion (path coefficients=.157, p<.05), kinship responsibilities (path coefficients=.081, p<.05), and opportunity (path coefficients=-.145, p<.05). Four variables related to intention to stay were statistically significant, including job satisfaction (path coefficients=.338, p<.05), kinship responsibilities (path coefficients=.123, p<.05), pay (path coefficients=.086, p<.05), and opportunity (path coefficients=-.072, p<.05). Two variables were directly correlated to turnover behavior: intention to stay (path coefficients=-.160, p<.05), and education and training (path coefficients=.153, p<.05). However, in this model, the job-satisfaction variable had the strongest correlation with nurses' intention to stay (r=.53).

Larrabee et al. (2003) studied the relative impact of nurse attitudes, context of care, and structure of care on job satisfaction, intention to leave, and nurse turnover. The construct of 'context of care' consisted of leadership style, staffing, and unit turbulence. The construct of 'structure of care' included autonomy and control of practice, nurse-physician collaboration, group cohesion, and support services. The construct of 'attitudes' comprised psychological empowerment and hardiness. A total of 90 registered nurses were drawn from a 450-bed medical center in north-central West Virginia. The Work Quality Index (WQI) instrument, developed by Whitley and Putzier (1994), was used to measure nurses' job satisfaction. Intention to leave was measured by the single-item scale developed by Price and Mueller (1981). Results from a multiple regression analysis revealed that the variables of psychological empowerment, support services, nurse-physician collaboration, and leadership style jointly explained 58% ($p<.0001$) of the variation in registered nurses' job satisfaction. Clearly, those variables are strong predictors of job satisfaction. The results also showed that job satisfaction was the primary predictor of intention to leave because it explained 26% ($p<.0001$) of the variation of intention to leave.

Hellman (1997) conducted a meta-analysis study to determine the generalizability of the relationship between job satisfaction and intention to leave. The sample of articles was collected from a search of published research, which including a manual and computer database search for 1980-1993. A total of 50 research articles were included in this study. The total sample of participants in the 50 studies was 18,239. The results showed that the overall correlation between job satisfaction and intent to leave was

negative and significant (r=-.31). In further analyses that included controlling tenure with the organization and tenure in the current job and that included an analysis controlling for both tenure with the organization and tenure in the current job together, the correlations remained similar, namely, -.30, -.29, and -.30, respectively. However, the author did not provide the information of p values that could not identify whether the correlations are significant.

Lambert et al. (2001) used Structural Equation Modeling (SEM) procedures to test a proposed model of turnover process based on a secondary data analysis. In the model, demographic factors and work environment factors influenced job satisfaction, and job satisfaction predicted turnover intention. In this study, data for a total of 1,095 respondents were taken from the 1977 Quality of Employment Survey. The LISREL statistics package was used to estimate the outcomes for the proposed model. Results showed that task variety (β=.28, p<.05), role conflict (β=-.27, p<.05), relations with coworkers (β=.17, p<.05), financial rewards (β=.35, p<.05), tenure (β=-.07, p<.05), gender (β=-.08, p<.05), and age (β=.16, p<.05) could all predict job satisfaction. In addition, financial rewards, tenure, age, job satisfaction, and availability of alternative could predict turnover intention. Of all the tested factors related to the of intention-to-leave variable, job satisfaction (β=-.40, p<.05) was the best predictor, explaining 32% of the variation for turnover intention. In addition, this study indicated that the work environment explained 48% of the variation of job satisfaction.

Summary

The six studies that were conducted in both nursing and non-nursing professional

fields produced a common finding; namely, job satisfaction is either significantly and negatively correlated to or is the primary predictor of employees' intention to leave. These findings are consistent with Lake's (2002) assertion in her PES-NWI that practice environment links to nurse outcomes. Some other major findings of these studies are presented next.

The first relates to sample size. The sample sizes in most of the reviewed studies were adequate to large, except for one study (Larrabee et al., 2003). That study recruited only 90 subjects, which was too few to cover all the variables measured in the study. A more accurate analysis would require at least 10 subjects for each variable, since there were more than nine predictors tested in the study (Nunnally & Bernstein, 1994). Another limitation was that two studies (Shader et al., 2001; Larrabee et al., 2003) recruited all the nurse subjects within a single hospital. This may have hindered the generalization of the results. In addition, a random sampling procedure was used in only one study (Lu et al., 2002).

The second aspect relates to the instruments used in the studies. There is a wide variety of questionnaires used for the measurement of job satisfaction; however, the common themes of those questionnaires were leadership style, staffing, autonomy and control over practice, nurse-colleagues and nurse-physician relationships, support service, and pay. Most of the common themes are congruent with Lake's (2002) viewpoint of professional practice environment; that is, the attributes of professional practice environment include nurse participation in hospital affairs; nursing foundation for quality of care; nurse manager ability, leadership, and support of nurses; staffing and resource

adequacy; and collegial nurse-physician relations. The third aspect relates to data analysis. Except for two studies (Lu et al., 2002; Hellman, 1997) that used the Pearson product-moment correlation, the other four studies used either path analysis, Structural Equation modeling (SEM), or multiple regression analysis. Those techniques can provide more accurate predictions or explanations of the dependent variables (Huck, 2004).

Organizational Commitment and Intention to Leave

Organizational commitment is an attitude that reflects the individual's relative strength of identification with and involvement in a particular organization (Mowday et al., 1979). Historically, the assumption has been that attitudes serve the function of guiding people's behavior. The stronger the attitudes are, the more powerful is their ability to predict people's behavior (Armitage & Christian, 2003). Hence, attitudes have been used as predictors of intention-to-leave or turnover behavior (Mowday et al, 1979; Porter et al., 1974).

In addition, researchers have empirically studied predictors of intent to leave based on various theoretical bases. In nursing studies, the focus has been placed on job satisfaction and professional commitment as predictors of intent to leave (Larrabee et al., 2003; Lu et al., 2002; Shader et al., 2001; Cavanagh & Coffin, 1992**).** Yet**,** a growing body of research in industrial settings have indicated that organizational commitment is either negatively related to or a stronger predictor of intention to leave or turnover than job satisfaction or professional commitment (Jaramillo, Nixon, & Sams, 2005; Wasti, 2003a; Ingersoll et al., 2002; Fang, 2001; Chen & Francesco, 2000; Williams & Hazer, 1986). Moreover, organizational commitment suggests a related but more global

evaluation of the linkage between the employee and the organization in which job satisfaction has been included as a specific component (Porter et al., 1974). In addition, comparing the level of organizational commitment between "stayers" and "leavers," researchers found that the stayers have higher levels of organizational commitment than leavers (Ingersoll et al., 2002; Johnston, Varadarajan, Futrell, & Sager, 1987). Little research, however, was located that explores whether strength of organizational commitment affects intention to leave or stay among hospital nurses.

Research Findings

A total of ten studies focusing on the relationship between organizational commitment and individuals' intentions to leave their current job are reviewed and critiqued in this section. Four studies examined the relationship of these two variables in nursing field (Lynn & Redman, 2005; Ingersoll et al., 2002; Fang, 2001; Somers, 1995), and they are discussed first. The next six studies, taken from research in non-nursing professional fields, were conducted in Asian countries (Wasti, 2003a; Chen & Francesco, 2000) and in the U.S. (Jaramillo et al., 2005; Kacmar et al., 1999; Buchko, Weinzimmer, & Srgeyev, 1998; Shore et al., 1990), and they are presented according to their year of publication.

Motivated by the severe nursing shortage, Lynn and Redman (2005) investigated factors that affect nurses' intentions to leave their current jobs and the nursing profession. A total of 787 nurses, drawn from eight states in the U.S., participated in this study. The OCQ (Porter et al., 1974), Satisfaction in Nursing Scales (SINS), and a self-developed questionnaire were used to measure organizational commitment, job satisfaction, and

intention to leave, respectively. The selected demographic data, organizational commitment, professional satisfaction, and job satisfaction were treated as predictors of intention to leave the job and intention to leave the nursing profession. Multiple regression was used to analyze the data. The results indicated that organizational commitment and job and professional satisfaction were significantly and negatively correlated to intention to leave, and they explained 42% of the variation in intention to leave the current job. Yet, only professional and job satisfaction, not organizational commitment, predicted nurses' intention to leave their profession. In this study, however, the researchers did not point out the predictive strength of each significant predictor.

Ingersoll et al. (2002) conducted an investigation to identify the relationships among job satisfaction, organizational commitment, and intention to leave in respect to nurses' 1-year and 5-year career intentions. A total of 4000 registered nurses were randomly drawn from the New York State Department of Education. The OCQ (Porter et al., 1974), the Index of Work Satisfaction (IWS), and a self-developed questionnaire were used to measure organizational commitment, job satisfaction, and career intentions, respectively. The results showed that nurses' career intentions were negatively associated with level of job satisfaction and organizational commitment. Finally, the multiple regression analysis indicated that, on the whole (for 1- and 5-year career intentions), organizational commitment ($p<.001$) was a stronger predictor of intention-to-leave than other independent factors. For 1-year career intentions, perception about task requirements ($\beta=-.08$, $p=.04$) and organizational commitment ($\beta=-.211$, $p<.0001$) predicted career intentions. For 5-year career intentions, professional status ($\beta=-.132$,

p<.01) and organizational commitment (β=-.184, p<.001) were predictive of career intentions. Whether in regard to 1- or 5-year career intentions, however, organizational commitment was apparently the strongest predictor of nurses' intentions to leave in this study. In addition, the study found that nurses intending to change employers were less committed than nurses planning to stay at the same organization (F=18.9, p<.05).

Fang (2001) attempted to identify factors that have a severe effect on turnover and nurses' intention to leave their current jobs in Singapore. The sample consisted of 200 nurses from a general hospital employing 1000 nurses in Singapore. Most of the subjects were Chinese (63.7%); others were Malays (17.9%) and Indians (12.3%). The OCQ (Porter et al., 1974), Job Descriptive Index (JDI, Smith et al., 1969), and a self-developed questionnaire were employed to measure organizational commitment, job satisfaction, and intention to leave. A Pearson product-moment correlation and multiple regression statistics were used to analyze the data. The results revealed that three factors significantly predict the dependent variable of intention to leave. Those factors were organizational commitment (β = -.306, p < .001), stress (β = .29, p < .001), and supervisor satisfaction (β = -.168, p < .05). Obviously, organizational commitment had a negative correlation with, and was the stronger predictor of intention to leave than job satisfaction.

Somers (1995) examined the relationships among organizational commitment, intention to remain, and turnover behavior. The participants in this study were 388 nurses drawn from a large urban hospital in the U.S. A three-component instrument, referred to as the Affective, Continuance, and Normative Commitment Scale, which was developed

by Allen and Meyer (1990), was used to measure organizational commitment. The author did not identify the instrument used to measure either intention to leave or turnover behavior. The results from the regression analysis indicated that both affective (β=.34, p<.01) and normative commitment (β=.17, p<.01) were positively related to and were significant predictors of nurses' intention to remain with their organizations, explaining 22% of the variation of the outcome variable. Further analysis showed that all types of commitment had no function in predicting turnover behavior of nurses.

Jaramillo et al. (2005) examined the relationships among job stressors, job satisfaction, and organizational commitment on police officers' intention to leave their jobs. The job stressors include role conflict and ambiguity, supervisor support, group cohesiveness, and promotion opportunities. A sample of 150 police officers in the U.S. participated in this study. The three-component commitment scale (Allen & Meyer, 1990) was applied to the measure of organizational commitment. Intention to leave and job satisfaction were measured with instruments developed by Mitchell (1981) and by Brown and Peterson (1993), respectively. The results of a multiple regression analysis indicated that job satisfaction (partial correlation=0.33, p=.00), supervisor support (partial correlation=0.04, p=.01), group cohesiveness (partial correlation=0.04, p=.01), and promotion opportunities (partial correlation=0.14, p=.00) were positively correlated to organizational commitment. Those predictors explained 64% of the variation in organizational commitment. Of those factors, job satisfaction had the strongest correlation with organizational commitment. Finally, this study showed that only organizational commitment was significantly and negatively correlated to intention to

leave, explaining 13.7% (p<.01) of the variation in intention to leave.

Wasti (2003a) investigated the effect of cultural values on organizational commitment and employees' intention to leave. Participating in this study were 914 subjects drawn from 46 private organizations in Turkey. A three-component questionnaire (Allen & Meyer, 1990) was used to measure organizational commitment. The intention-to-leave variable was measured with the Job Withdrawal Scale (JWS), which was developed by Hanisch and Hulin (1990). A Pearson product-moment correlation and a hierarchical regression procedure were used to analyze data. The results showed that affective (r=-.53, p<.001) and normative commitment (r=-.54, p<.001), which are regarded as parts of organizational commitment, were significantly and negatively correlated to and were strong predictors (p<.001) of employees' intention to leave, regardless of cultural values. In addition, the results from the hierarchical regression analysis indicated that cultural values moderated the relationship between organizational commitment and intention to leave (ΔR^2=.006, p<.05). Individuals scoring lower on individualism had higher normative commitment (allocentrisim was related to normative commitment, r = .35, p<.001) and were less likely to present intention to leave (allocentrism was negatively related to intention to leave, r = -.10, p<.01). The author stressed that this findings supported the importance of a normative perspective on organizational commitment, especially in collectivistic contexts.

Chen and Francesco (2000) examined the relationships among employee demography, organizational commitment, and employees' intention to leave their jobs based on cultural perspectives. A total of 333 employees in China were recruited, and the

OCQ (Porter et al., 1974) was used to measure organizational commitment. The intention-to-leave variable was measured by a 3-item scale developed by Farh, Tsui, Xin, and Chen (1998). A Pearson product-moment correlation and multiple regression analysis were used to analyze data. The results showed that, of all demographic data, only position (r=.14, p<.01) was significantly correlated to organizational commitment. In the hierarchical regression analysis, the result indicated that organizational commitment gave the strongest prediction of intention to leave (β=-.67, p<.01).

In this study the researchers provided an explanation of the relationship between the variables of position and organizational commitment based on the Chinese cultural perspective. For the Chinese people, the higher the position attained the better the relationship with one's boss becomes. Thus, the development of such relationships may have a stabilizing effect and produce a profound commitment to the organization.

Kacmar et al. (1999) examined similarities and differences of the OCQ (Porter et al., 1974) and Organizational Commitment Scale (OCS) in their measurements of the antecedents and consequences of organizational commitment. The authors stated neither their research design and sample characteristics nor the instrument used for measuring intention to leave. They found, however, that job satisfaction was correlated with organizational commitment when measured with the OCQ (r = .68) and the OCS (r = .59 for identification commitment, .57 for affiliation commitment, and .55 for exchange commitment). In addition, when measured with the OCQ, marital status, leader-member exchange, and justice were antecedents of organizational commitment, whereas intention to leave (path coefficients=-.65, p<.05) and job satisfaction (path coefficients=.63, p<.05)

were its consequences. As measured with the OCS, identification (path coefficients=-.37, $p<.05$) and affiliation commitments (path coefficients=-.22, $p<.05$) could predict only intention to leave, but not job satisfaction. From both measures, organizational commitment was identified as a significant predictor of intention to leave.

Buchko et al. (1998) tested a proposed model regarding the antecedents, correlates, and consequences of organizational commitment. The antecedents consisted of demographic data, the correlates comprised job involvement and job satisfaction (for example, pay, promotion, supervision, co-worker, and work itself), and the consequence was employees' intention to leave their jobs. A total of 180 subjects, consisting of managers and workers, were recruited from a large Russian company. The Job Descriptive Index (JDI, Smith et al., 1969), OCQ (Porter et al., 1974), and Intention to Turnover Scale (ITS, Cammann, Fichman, Jenkins, & Klesh, 1983) were utilized to measure job satisfaction, organizational commitment, and intention to leave, respectively. A Pearson product-moment correlation was used to analyze data. The results showed that only age and tenure were significant antecedents of organizational commitment. The variables that were correlates of organizational commitment were all significant ($p<.01$). Finally, organizational commitment ($r=-.564$, $p<.001$) was found to be negatively correlated to intention to leave. Further analysis was conducted to examine the pure correlation between organizational commitment and intention to leave. Those five satisfaction factors and job involvement were controlled; however, the partial correlation between the two variables remained significant ($r=-.253$, $p<.05$).

Similarly, Shore et al. (1990) tested a proposed model to differentiate job and

organizational attitudes in relation to employee behavioral intentions. The organizational attitudes included organizational commitment and satisfaction, and the job attitudes comprised job involvement and job satisfaction. A total of 666 employees drawn from a large university in the U.S. joined this study. The OCQ (Porter et al., 1974) and Michigan Organizational Assessment Questionnaire (MOAQ) were used to measure the variables of organizational commitment and intention to leave. A Pearson product-moment correlation and LISREL statistical techniques were applied to the data analysis. The results showed that only organizational commitment (path coefficients=-.498, $p<.05$) had a significant correlation with intention to leave. Job satisfaction, on the contrary, did not have an effect on intention to leave, but it did have an effect on intention of absenteeism (path coefficients=-.468, $p<.05$). Finally, the results of the LISREL analysis indicated that organizational attitudes were more strongly correlated to behavioral intentions; nevertheless, job attitudes were more strongly correlated to job intentions.

Summary

In summary, according to the reviews of the four studies in the nursing field, one conducted in an Asian country (Fang, 2001) and three conducted in the U.S. (Lynn & Redman, 2005; Ingersoll et al., 2002; Somers, 1995), the studies have one finding in common. In all four studies, organizational commitment is strongly and negatively correlated to nurses' intention to leave their current jobs. For the six studies in non-nursing professions, two major findings can be summarized. First, two studies (Chen & Francesco, 2000; Wasti, 2003a) were conducted in Asian countries, China and Turkey, which represent collectivist cultures. Their results all showed that cultural values either

moderated the relationship between organizational commitment and intention to leave, or they had a profound effect on the development and stabilization of commitment to the organization. Second, the results from correlation, path, and regression analyses all indicated that the relationship between organizational commitment and intention to leave was negative and significant.

As for the instruments used to measure organizational commitment and intention to leave, seven of the ten studies used the OCQ (Porter et al., 1974), and three studies used the three-component scale (Allen & Meyer, 1990). A variety of instruments were used to measure the intention-to-leave variable. Three of the studies, however, used self-developed questionnaires (Lynn & Redman, 2005; Ingersoll et al., 2002; Fang, 2001), and one study (Somers, 1995) did not identify the instrument used to measure intention to leave. These analyses show, once again, that the OCQ has been used widely in research both in the nursing and non-nursing professions.

Collectivist Orientation, Perception of Practice Environment, and Organizational Commitment

Although they may be in the same geographical region—for example, Asia—different countries with collectivist orientations may have different cultural traits. Therefore, even in a single collectivist culture, a certain number of people will display the traits of individualism (Triandis et al., 1988; Triandis, 1995). Consequently, individuals within these countries may have different organizational behaviors.

Research Findings

Two non-nursing professional studies conducted in Asian countries, Turkey and

China, provided different results regarding the relationships among collectivist, job satisfaction, and organizational commitment.

Wasti (2003b) conducted a study to discover the influence of cultural values (collectivism versus individualism) on the antecedents of organizational commitment. The antecedents in this study included education, ownership, tenure, and job satisfaction. The three-component commitment questionnaire (Allen & Meyer, 1990), the Individualism and Collectivism questionnaire (INDCOL, Singelis, Triandis, Bhawuk, & Gelfand, 1995), and the Job Descriptive Index (JDI, Smith et al., 1969) were used to measure the variables of organizational commitment, cultural perspective, and job satisfaction, respectively. The measurement of job satisfaction comprised satisfaction with the work itself, coworkers, supervisor, pay, and promotion opportunities. Organizational commitment consisted of three major categories: affective, normative, and continuance commitment. A total of 914 subjects were drawn from 46 organizations in Turkey, where the national culture is regarded as having a collectivist orientation. A regression analysis was used, and variables of education, ownership, and tenure were controlled.

The results indicated that, for employees with collectivist values, satisfaction with supervisor was a significant antecedent in predicting affective commitment (β=.157, p<.05), normative commitment (β=.217, p<.01) and continuance commitment (β=.18, p<.05). For employees with individualist values, satisfaction with work itself was the only significant factor in predicting affective (β=.326, p<.001), normative (β=.329, p<.001), and continuance commitment (β=.192, p<.05), whereas satisfaction with

promotion opportunities predicted only affective commitment. In this study, job satisfaction was a significantly important antecedent of organizational commitment. The following study, however, has the opposite finding.

Wong, Wong, Hui, and Law (2001) conducted a study to compare the effect of organizational commitment on job satisfaction and turnover intention between Chinese and Western employees. A total of 205 subjects were drawn from middle-level managers and technical workers in four joint ventures in China. The variables of organizational commitment, intention to leave, and job satisfaction were measured by the OCQ (Porter et al., 1974), Intention to Turnover Scale (ITS, Camman et al., 1979), and a self-developed scale, respectively. Structural Equation Modeling (SEM) was used to examine the causal model. In this study, the authors highlighted three major concepts that are important in the traditional Chinese culture. They are loyalty, 'guanxi,' which means relationships, and 'pao,' which means rewarding those who treat you well. Where these traditional Chinese cultural values prevailed, the authors assumed that the employees' commitment to their organization would have a strong effect on their job attitudes and behaviors.

The findings revealed that organizational commitment had a strong and direct effect on job satisfaction (path coefficients=.99) and turnover intention (path coefficients=-.31) simultaneously, whereas job satisfaction had no effect on commitment or intention to leave. This result was contrary to the findings for samples of participants in Western countries, for whom job satisfaction had a direct and profound effect on organizational commitment and turnover intention. The authors, however, asserted that

the results provided strong support to their previous hypotheses that traditional Chinese cultural values of loyalty, ‘guanxi’, and ‘pao’ still play an essential role in affecting Chinese employees’ attitude and behavior toward organization.

Summary

The studies in China (Wong et al.) and Turkey (Wasti) have some aspects in common. First, they were located in Asia, which is predominately collectivist. Second, they revealed the key trait of collectivist cultures, namely, the valuing of the relationships within the ingroup.

The Wasti’s study (2003b) pointed out an important fact that individuals within the collectivist-oriented country may have different cultural traits—individualist orientation. The findings in this study imply that individualists are focusing on perceptions of their job enjoyment, not on the relationships of the ingroup, and the degree of this perception determines the individualists’ commitment to their organization. Those findings are congruent with the attributes of individualism mentioned earlier in this chapter (Triandis, 1995; Triandis et al., 1988). For employees with collectivist values, satisfaction with supervisor was found to be a more important predictor of organizational commitment than satisfaction with the work and promotion. This finding is congruent with the attributes described in collectivist theory, in which individuals value their relationships with colleagues in their ingroup and place their priority on the goals of their group (Triandis, 1995; Triandis et al., 1988). Relationships may be the determining reason for them to stay in a group.

Perception of Practice Environment, Organizational Commitment, and Intention to Leave

Turnover behavior studies have been inconsistent in their treatment of the relationships among job satisfaction, organizational commitment, and intention to leave. Sometimes job satisfaction is regarded as an antecedent of organizational commitment and sometimes as a consequence. Sometimes they have a reciprocal relationship, and sometimes a causal order is not proposed. Except for those findings, little else is found and discussed regarding their relationships in nursing settings.

Research Findings

This section will discuss nine studies regarding the causal order among job satisfaction, organizational commitment, and intention to leave or turnover behavior. Of those studies, only one was presented in the perspective of nursing in the U.S (Lum et al., 1998), and this study will be reviewed first. No single study was located that takes a cultural perspective. Of the remaining eight studies, one (Aryee et al., 1991) was conducted in an Asian country, Singapore, and they all relate to non-nursing professionals. The studies will be discussed according to related topics.

Lum et al. (1998) developed and tested three causal models composed of job satisfaction, pay satisfaction, and organizational commitment to explain nurses' intention to leave. A total of 466 nurses were drawn from hospitals in the U.S. All instruments used in this study were modified from the original instruments of the OCQ (Porter et al., 1974), the Job Satisfaction Scale (JSS, Stamps, Piedmont, Slavitt. & Haase, 1978), and Intentions toward Turnover (TI). Path analysis was used to test these models. The model

supported by this study indicated that pay satisfaction was the direct predictor of job satisfaction (standardized path coefficient=.39). Job satisfaction (standardized path coefficient=.40) was the only immediate predictor of organizational commitment, and indirectly affected nurses' intentions to leave through organizational commitment. Finally, organizational commitment has the strongest and most direct effect on nurses' intention to leave their current jobs (standardized path coefficient=-.30).

To analyze the antecedents and consequences of organizational commitment on marketing managers, DeConinck and Bachmann (1994) developed four structural equation models and tested them. The antecedents proposed included job satisfaction, distributive justice, promotional opportunity, and seniority. The dependent variable was intention to leave. Participants in this study were 336 marketing managers in the U.S. To measure job satisfaction, organizational commitment, and intention to leave, the instruments used were the scale developed by Price and Mueller (1986), the 5-item scale developed by Hunt, Larry, Chonko, and Wood (1985), and a self-developed scale, respectively. The LISREL statistic package was used to test these models. The results from the supported model showed that higher levels of job satisfaction (path coefficients=.375) led to the higher level of organizational commitment, and higher levels of organizational commitment (path coefficients=-.736) led to lower levels of intention to leave. In addition, organizational commitment was not only the strongest predictor of intention to leave, but also a mediator of job satisfaction and intention to leave.

To assess causal effects, Brown and Peterson (1993) applied a meta-analysis to identify the antecedents and consequences of salespersons' organizational commitment. A

total of 59 studies were included in this study. The author proposed a model containing six major variables: role ambiguity, role conflict, performance, job satisfaction, organizational commitment, and the dependent variable of propensity to leave. Path analysis was used to estimate the model. The final results suggested that job satisfaction (standardized path coefficients=.47), role conflict (standardized path coefficients=-.22), and performance (standardized path coefficients=.08) significantly and directly predicted organizational commitment. Job satisfaction presented the strongest ability to predict organizational commitment. The variables of role ambiguity (standardized path coefficients=.18), and organizational commitment (standardized path coefficients=-.78) directly predicted the propensity to leave. Clearly, organizational commitment was the strongest predictor of the dependent variable. In a further test, this study found that there was no reciprocal causal path from organizational commitment to job satisfaction.

Gregson (1992) used Structural Equation Modeling (SEM) to analyze two existing data sets and compare the results in order to examine the causal relationship of job satisfaction, organizational commitment, and intention to leave or turnover. The sample sizes for these two data sets were 150 and 232. Several models were tested to ascertain the path direction of job satisfaction and organizational commitment. The results showed that all independent variables in this study affected intention to leave or turnover through both job satisfaction and organizational commitment. In addition, the model with the causal relationship from job satisfaction to organizational commitment when predicting intention to leave or turnover was a better model fit for both data sets (Chi square = 15.47 and 16.44, GFI = .96 and .98, and RMSR = .06 and .02 for the two data sets).

The same results were found in a different cultural context. Aryee et al. (1991) studied the antecedents of organizational commitment and intention to leave in Singapore. A total sample of 245 subjects was drawn from certified public accountants in Singapore. The OCQ (Porter et al., 1974) and two self-developed scales were used to measure organizational commitment, job satisfaction, and intention to leave, respectively. A multiple regression statistical procedure was used to analyze the data. Five variables were put forth as the antecedents of organizational commitment. The results showed that only job satisfaction, realization of professional expectations, and professional commitment were statistically significant in prediction of organizational commitment. Job satisfaction had the highest incremental contribution to organizational commitment (47%), followed by realization of professional expectations (4%) and professional commitment (3%). With intention to leave as the dependent variable, the set of antecedents consisting of organizational commitment explained 37% of the variance of intention to leave. Organizational commitment provided the highest incremental contribution (32%), followed by job satisfaction (4%). Therefore, organizational commitment played an important role as mediator between job satisfaction and intentions to leave.

Williams and Hazer (1986) has similar results. These authors conducted a secondary data analysis using four turnover models to determine the antecedents and consequences of job satisfaction and organizational commitment. The Structural Equation Model (SEM) methods were employed for the model estimate. The results from the supported model indicated first that personal characteristics and work environment had no direct effects on intention to leave, but they directly influenced job satisfaction, and

they indirectly affected organizational commitment through job satisfaction. Thus, job satisfaction was an antecedent of organizational commitment (β=.85). Second, organizational commitment (β=-.56) had a stronger prediction of intention to leave than job satisfaction. Moreover, intention to leave was the only significant variable (β=.29) to predict turnover behavior.

Contrary to the results from the previous studies, some researchers found that organizational commitment and job satisfaction played the same role on intention to leave. Tett and Meyer (1993) conducted a meta-analysis study to estimate the six relationships among job satisfaction, organizational commitment, intention to leave, and turnover. A total of 155 research articles published from 1966 to 1992 were included in this study. The statistical techniques of path analysis were applied for the model estimate. The results showed that job satisfaction and organizational commitment jointly provided 49.3% explanation of variation in turnover intention. The job satisfaction (r =-.58, p<.05), however, had stronger correlation with turnover intention than organizational commitment (r =-.54, p<.05), although the difference was not large. Therefore, job satisfaction and organizational commitment could each predict intention to leave independently. Moreover, the study found that intention to leave accounted for 27 % of turnover variation. Both organizational commitment and job satisfaction were mediated through intention to leave to turnover.

In contrast to the findings mentioned above, one study argued that the relationship between job satisfaction and organizational commitment did not have a one-way but a two-way direction. Lance (1991) proposed and evaluated a structural model relating the

perception of work environment, job satisfaction, organizational commitment, and voluntary turnover. A total sample of 1,870 employees who had been employed at least six months was obtained from a telecommunications firm in the U.S. In this study, the author did not report the instruments used to measure the major variables. The Structural Equation Model (SEM) analysis was used to test the model. The results suggested a positively reciprocal relationship between job satisfaction and organizational commitment (job satisfaction to organizational commitment: parameter estimates= .498, $p<.001$; organizational commitment to job satisfaction: parameter estimates= .085, $p<.01$). Both job satisfaction (parameter estimates= -.174, $p<.001$) and organizational commitment (parameter estimates= -.141, $p<.001$) were directly correlated to behavior intentions. Organizational commitment, however, had direct effects on actual behavior (parameter estimates= -.080, $p<.01$), but job satisfaction did not. In addition, the effects of employees' perception of work environment on turnover were mediated by job satisfaction and organizational commitment.

Currivan's study (1999) produced a different finding regarding the causal order among job satisfaction, organizational commitment, and turnover. In this study, the author examined four alternative causal orders for job satisfaction, organizational commitment, and turnover, which included satisfaction to commitment, commitment to satisfaction, commitment and satisfaction affected reciprocally, and zero effects of those two variables. A sample consisting of 838 teachers was drawn from the public elementary and secondary schools in Chicago. The author, however, did not specifically identify what instruments had been employed to measure these major variables. The Structural

Equation Model (SEM) with LISREL statistical techniques was used to assess the model. The results suggested that there were no causal effects between job satisfaction and organizational commitment.

Summary

The nine studies can be compared in several respects. First, five of the studies were conducted with samples of human subjects, two used secondary data, and the other two used research articles for meta-analysis. The sample sizes in most of these studies were all large enough for statistical purposes, which was beneficial for generalizability. One secondary-data analysis study (Williams & Hazer, 1986), however, did not report the sample size used in the study. The sample size in Gregson's study (N= 150) was somewhat small for the statistical analysis of SEM, which is suggested to be between 250 and 500 to provide sufficient power to test most models proposed in social science research (Tanaka, 1987).

Second, to test the models, the statistical techniques used for estimates were either path analysis (four studies), Structural Equation Modeling (SEM; four studies), or multiple regression analysis (one study). Although SEM and path analysis, which are used for model testing, share similarities with multiple regression in terms of underlying assumptions and interpretation of results, the numerous advantages of SEM and path analysis favor their use in the analysis of the causal relationships among the variables specified in the models (Munro, 2001; Huck, 2004; Currivan, 1999).

Third, three studies had different findings about the relationships between the variables of job satisfaction and organizational commitment. One study (Tett & Meyer,

1993) found that the effect of organizational commitment on intention to leave was not as strong as the effect of job satisfaction on intention to leave, but intention to leave was the strongest predictor of turnover behavior. One study (Lance, 1991) showed that job satisfaction and organizational commitment had a reciprocal relationship. The other study (Currivan, 1999) suggested that there was no relationship between organizational commitment and job satisfaction.

Four, the results from six studies proposed a pattern of causal order among job satisfaction, organizational commitment, and intention to leave. Specifically, job satisfaction was the antecedent of organizational commitment, and organizational commitment was the strongest predictor of intention to leave and a mediator of job satisfaction and intention to leave.

Finally, the results of the causal order from one study conducted in the nursing professional (Lum et al., 1998) and from one study conducted in an Asian country (Aryee et al., 1991) were the same as the results from studies (Williams & Hazer, 1986; Gregson, 1992; Brown & Peterson, 1993; DeConinck & Bachmann, 1994) conducted in non-nursing professionals and in the US, which indicated a causal relationship from job satisfaction, organizational commitment, to intention to leave.

Conclusion

Forty-eight studies that were critically reviewed and selected provide insight into the relationships among collectivist orientation, perception of practice environment, organizational commitment, and intention to leave the current job. Of these studies reviewed, 23 were conducted in the nursing profession, and 25 were done in other,

non-nursing profession. Among the studies done in the nursing profession, 10 were done among Asian nurses, 3 compared the differences between Asian and western nurses, and 10 were done among western nurses. Most of the reviewed studies did not report how the researchers determined sample size although most of the sample sizes were large. Results from the above literature review provides strong evidence that support the proposed conceptual model (Figure 2) and its hypothesized relationships for this main study, which are summarized as follows: 1) The collectivist orientation is positively correlated to organizational commitment and perception of practice environment. Although 2 studies revealed no differences in perception of practice environment between Asian and western nurses, critiques have been proposed for these results. In addition, little research was located on the topic of perception of practice environment among Asian nurses. Yet, the results from 2 qualitative studies among Asian nurses regarding their work in US hospitals describe similar themes as the PES-NWI illustrated. They justify that PES-NWI is appropriate for measuring Asian nurses' perception of their practice environment in U.S. hospitals. 2) Perception of practice environment is positively correlated to organizational commitment. A direct effect of perception of practice environment on organizational commitment was also suggested. 3) Organizational commitment and perception of practice environment are independently and negatively correlated to intention to leave. Yet, organizational commitment is suggested a stronger immediate predictor of intention to leave. 4). Organizational commitment is a mediator of perception of practice environment and intention to leave. However, two studies have different findings. One indicated that there is no causal relationship, yet, the other one revealed

that there are reciprocal relationships between perception of practice environment and intention to leave. Little research was located measuring the relationship among perception of practice environment and other variables in this proposed conceptual model. In this literature review, some of the studies used perception of practice environment to measure job satisfaction, supporting use of job satisfaction as a synonymous concept with perception of practice environment. Findings from the reviewed literatures support the relationships among the variables in the proposed conceptual model.

Chapter 3: Methods

Research Design

The design for the proposed study was cross-sectional, descriptive and correlational. Most other studies that addressed foreign nurses working in Western cultures were based on qualitative research techniques (Bola, Driggers, Dunlap, & Ebersole, 2003; Magnusdottir, 2005; Omeri & Atkins, 2002). Moreover, their focus was on international nurses and not specifically Asian nurses, who have cultural backgrounds quite distinct from those of nurses from Western cultures. Furthermore, no previous study was located that focused on the collectivist orientation of Asian nurses, their perceptions of their practice environment, their organizational commitment, their intention to leave their current job, or the relationships among those parameters. This general lack of knowledge about Asian nurses made the descriptive, correlational design for the proposed study appropriate.

The relationships examined in the study were based on the conceptual framework (see Figure 2) described in Chapter 1 where collectivist orientation, perception of the practice environment, organizational commitment, and intention to leave the current job were the variables of interest. In addition, it was proposed that organizational commitment might be a mediator of perception of practice environment and intention to leave the current job. Before conducting the main study, the author performed a pilot study to test the reliability and validity of the instruments as they applied to this nurse population. A total of 35 nurses comprised the pilot sample (see Appendix A).

Population and Sample Selection

Population, Sampling, and Settings

The target population for this proposed main study was Asian nurses working in any type of hospital in the U.S. All participants were recruited through snowball sampling. Criteria for participation included the following: (a) the RNs had to be born in China, Hong-Kong, India, Indonesia, Japan, Korea, Malaysia, the Philippines, Singapore, Thailand, Taiwan, Vietnam, or other Asian countries in the Far East, (b) they could either work full-time or part-time as registered nurses in staff or non-managerial positions performing direct patient care, (c) they had to be working in U.S. hospitals, (d) they were required to have been employed in the present practice area for at least 6 months, (e) they were not working for an agency (e.g., traveling nurses), (f) they were able to speak, read, and write English, and (g) they had a home address, telephone, or e-mail address where they could be reached.

The reasons for choosing registered nurses currently working in hospitals for at least 6 months were that nurses need time to become familiar with their practice environments and to develop their individual commitment to their organizations, which tends to evolve slowly and consistently over time (Mowday et al., 1979). A study of organizational commitment could well be invalid if the participants have had only a short tenure with their organization. An employment of at least 6 months has been proposed as an appropriate time frame become familiar with their work environment and to develop their organization commitment (Randall & Muller, 1995; Alexander, 1994; Tetric & Farkas, 1988).

The design of this study was descriptive and that made it appropriate to conduct this research in natural settings (Burns & Grove, 2003). Therefore, participants could finish questionnaires at any place that was convenient and comfortable to them. There were no limits on the research setting for instrument completion.

Sample Size Estimation

The estimate of sample size was based on the results of a pilot study (see Appendix A). According to the proposed framework, three variables (collectivist orientation, perception of practice environment, and organizational commitment) were included as factors related to a criterion variable, intention to leave current job. Hierarchical regressions were performed to calculate the R^2 for estimating sample size. Intention to leave current job was the dependent or criterion variable, whereas collectivist orientation, perception of practice environment, and organizational commitment were the independent variables. Results showed that, when collectivist orientation was controlled for (adjusted R^2 = .027), perception of practice environment could add another 10.1% of explanation (total adjusted R^2 = .128) of the variation of intention to leave current job. After both collectivist orientation and perception of practice environment were controlled for (adjusted R^2 = .128), organizational commitment added another 38.5% of the variation of intention to leave current job. These three variables could explain 51.3% of the total variation of intention to leave current job.

Using nQuery, a software program for sample-size estimations, the investigator determined that 92 and 21 participants were needed to achieve a power of 90% with α as .05 in a two-tailed analysis for adjusted R^2 of .128 and .513, respectively. The

investigator used the smaller adjusted R^2 (adjusted R^2 = .128); therefore, the sample size of 92 was selected. In general, when estimating needed sample sizes, researchers should include the amount of nonresponse rate in the estimation, which has been suggested to be at least 20% of the planned sample size (Polit & Hungler, 1999). To be conservative, the investigator used 30% as the nonresponse rate in which a total of 120 subjects were estimated necessary to the study.

In addition, to obtain more information among different subgroups of Asian nurses, the investigator calculated the numbers of sample size for each ethnicity of Asian nurses based on the percentage of newly licensed registered nurses in the U.S. who were foreign educated. According to Brush et al.'s (2004) estimate, most Asian nursing graduates taking U.S. RN licensure exams in 2001 were from Philippine (52%), Korea (6%), and India (4.5%). Therefore, in this study, the Asian nurses were grouped into four groups, Philippines, Korean, Indian, and others (which including nurses from China, Hong-Kong, Indonesia, Japan, Malaysia, Singapore, Thailand, Taiwan, Vietnam, and other Asian countries in the Far East). Based on the proportions of these Asian nurses of International nurses, the investigator recruited 63 (52% × 120) Philippine nurses, 7 (6% × 120) Korean nurses, 5 (4.5% × 120) Indian nurses, and 45 nurses from other Asian countries in the Far East.

Description of the Sample and their Work Settings

The description of the sample includes (1) the states and work units where the data were collected and (2) the demographics of the sample.

Settings: States and Work Units

Table 6 gives the details regarding the distribution of the sample. The sample was collected from six states in the U.S.A. The two states contributing the majority of the sample were California, with 77 (64.2%) of the participants, and Texas, with 29 (24.2%) of the participants. The 120 Asian nurses in the sample were employed in 26 hospitals, 14 (53.8%) of which were in California and 8 (30.8%) of which were in Texas. In addition, most of the Asian nurses were assigned to either of two types of work units as follows: intensive care units, with 56 (46.7%) of the participants, and Med/Surg units, with 30 (25.0%) of the participants.

Demographics of the Sample

Demographic information is presented in Table 7. A total of 271 questionnaires were distributed and 202 were returned, for a response rate of 74.5%. However, 3 of the 202 participants were licensed practical nurses (LPNs), 1 was a manager, and 6 did not fill out a complete instrument. Those incomplete questionnaires (10) were excluded from the analysis. In addition, based on the proposed sample representation, 63 Filipino, 7 Korean, 5 Indian nurses, and 45 nurses from other countries in the Far East were needed. Therefore, the first 63, 7, 5, and 45 returned questionnaires from nurses from the Philippines, Korea, India, and other countries in the Far East, respectively, were used for the analysis (N = 120). All the 120 questionnaires used for the study were complete for measuring the variables, but had some missing data in the demographic information section.

Of the 120 participants, 107 (89.2%) were females, with a mean age of 39.55 years (*SD* = 9.50, median = 37.00) and with an average length of stay in the U.S. of 12.93 years

Table 6

Settings: States and Work Units

States	*N* of hospitals	*N* of subjects	%	Work unit	*N* of subjects	%
California	14	77	64.2	Intensive care	56	46.7
Texas	8	29	24.2	Med/Surg	30	25.0
Washington	1	9	7.5	Psychiatry	11	9.2
Virginia	1	3	2.5	Ob/Gyn	9	7.5
Illinois	1	1	0.8	ER	3	2.5
Alaska	1	1	0.8	Oncology	2	1.7
				Rehab	2	1.7
				Others	7	5.7

Table 7

Demographics of the Sample (N = 120)

	N	%
Gender		
Female	107	89.2
Male	13	10.8
Marital status		
Married	85	70.8
Single	25	20.8
Divorced/other	3	2.5
Missing	7	5.8
Country born		
Philippines	63	52.5
PROC	19	15.8
Taiwan	18	15.0
Korea	7	5.8
India	5	4.2
Thailand	5	4.2
Other	3	2.5
Country of basic nursing education earned		
Philippines	58	48.3
USA	19	15.8
Taiwan	18	15.0
PROC	8	6.7
Korea	7	5.8
India	5	4.2
Thailand	4	3.3
Other	1	.8
Basic nursing education		
AD	17	14.2
Diploma	16	13.3
BSN	85	70.8
Other (Missing data)	2	1.7
Country of highest nursing education earned		
Philippines	57	47.5
USA	24	20.0
Taiwan	14	11.7
PROC	7	5.8
Korea	7	5.8
India	5	4.2
Thailand	4	3.3
Other	2	1.7

Table 7

Demographics of the Sample (Continue)

	N	%
Highest nursing education		
AD	21	17.5
BSN	90	75.0
Master	7	5.8
Other	2	1.7
Employment status		
Full time	98	81.7
Part time	21	17.5
Other	1	.8
Language used		
Mostly mother language	14	11.7
Equal of mother language and English	96	80.0
Mostly English	10	8.3
Language preferred to use		
Only mother language	2	1.7
Mostly mother language	17	14.2
Equal of mother language and English	86	71.7
Mostly English	9	7.5
Only English	6	5.0
Self-identified as (self-identity)		
Oriental	9	7.5
Asian	79	65.8
Asian-American	9	7.5
Own country-American	22	18.3
American	1	.8
Place being raised		
Asia only	100	83.3
Mostly Asia, some US	14	11.7
Equally Asia and US	2	1.7
Mostly US, some Asia	4	3.3
Rating self as		
Very Asian	38	31.7
Mostly Asian	45	37.5
Bicultural	32	26.7
Mostly westernized	5	4.2

Table 7

Demographics of the Sample (Continue)

	M (SD)	Range	Median
Age	39.55 (9.50)	25-73	37.00
Years practicing before US	5.22 (5.03)	0-22	3.75
Years living in US	12.93 (9.17)	1-36	12.00
Years practicing in US	10.42 (8.91)	1-36	8.50
Years practicing in current job	6.79 (7.21)	1-36	4.46

(*SD* = 9.17, median = 12.00). The majority of participants had been raised in Asia only (*N* = 100, 83.3%). Most participants spoke (*N* = 96, 80.0%) and preferred to speak (*N* = 86, 71.7%) both their mother language and English about equally well. Most identified themselves as oriental or Asian (*N* = 88, 73.3%), and 83 (69.2%) thought of themselves as very Asian or mostly Asian. Seven participants did not answer the question about marriage, but 85 (70.8%) participants reported they were married and 25 (20.8%) reported they were single.

The majority of participants had a bachelor's degree (*N* = 85, 70.8%) or associate's degree (*N* = 17, 14.2%) as their basic nursing education. Only 7 (5.8%) participants had earned a degree higher than a bachelor's degree. Most participants had acquired their basic nursing education (*N* = 100, 83.3%) or highest-level nursing education (*N* = 94, 78.3%) in their mother countries; however, 19 participants (15.8%) had acquired their basic nursing education in the U.S. even though they were first-generation immigrants in the U.S. Before coming to the U.S., they had practiced nursing a mean of 5.22 years (*SD* = 5.03, median = 3.75), and at the time of the study they had practiced nursing in the U.S. a mean of 10.42 years (*SD* =8.91, median = 8.50) and in their current jobs a mean of 6.79 years (*SD* = 7.21, median = 4.46). The majority of participants worked full time (*N* = 98, 81.7%).

Instruments

In this main study, all instruments used were all in their English version. Studies (Hulin, 1987; Uhl & Day, 1993) have revealed that within-language scales had fewer biased items than between-language scales. Therefore, in a study involving Asian nurses

who worked in the U.S. and who could read, write, and speak English, the use of an English-language instrument was appropriate. The study would then avoid translation issues that could affect the measurement equivalence of the scales. In addition, cultural values could affect the participants' thinking in regard to some survey questions (Hui & Triandis, 1985). Researchers found that instruments applied across populations with similar cultural values, such as Asian nurses, tended to have high transportability (Liu et al., 2004; Schwartz & Bardi, 1997). Generally speaking, therefore, the same instrument could be used in a study of nurses from different Asian countries because those nurses share similar cultural values.

The questionnaire package used in this proposed study consisted of two main parts. In the first part, four instruments with a total of 62 items were used to measure Asian nurses' collectivist orientation, perception of practice environment, organizational commitment, and intention to leave the current job. In the second part, a 20-item demographic data form was used to gather participants' demographic information. In the following sections, the instruments used in the proposed study are described in detail with scaling, reliability, and validity estimates reported.

The Collectivist Orientation (CO)

The four-item Collectivist Orientation (CO) questionnaire measured individuals' perceptions of their collectivist orientation (Wang et al., 2002). The scale uses a five-point Likert scale. Responses range from 1 (strongly disagree) to 5 (strongly agree). A higher score represents a higher degree of collectivist orientation. The CO was first developed in English from another instrument and was translated to Chinese and tested

for its validity and reliability with 30 Chinese MBA students who were newly arrived in the U.S. from the People's Republic of China. Its Cronbach's alpha was .64. Content validity was tested with evidence for its validity present. Modifications were made after the testing, and the final version of the CO was tested with 510 Chinese workers in China. A confirmatory factor analysis showed that all four items of the CO significantly loaded on the construct collectivist orientation (Wang et al., 2002).

No modifications were made in this instrument for the pilot study. In the pilot study, the reliability of the CO scale was tested by internal consistency. The Cronbach's alpha was .73 (see Table A3). The validity of the CO scale was evidenced by discriminant validity (see Table A5). Therefore, no modification was made for the main study because of the satisfactory reliability and evidenced validity. In the main study, the Cronbach's alpha was .66. Compared to the Cronbach's alpha in the original study for scale development (Wang et al., 2002), the Cronbach's alphas of the CO scale in the pilot study and the main study were higher (see Table 8).

The Practice Environment Scale of the Nursing Work Index (PES-NWI)

The 31-item Practice Environment Scale of the Nursing Work Index (PES-NWI) developed by Lake (2002) was based on the Nursing Work Index (NWI), which was designed by Kramer and Hafner (1989) to measure job satisfaction and perceived productivity of nurses. The PES-NWI measures nurses' perception of their nursing practice environment in hospitals. The scale uses a 4-point response Likert scale (ranging from 1 to 4) with higher scores indicating greater agreement. Tests for Cronbach's alpha, intraclass correlation (ICC), factor analysis, construct validity, known-groups validity,

Table 8

Reliabilities of Instruments in the Original Study, Pilot Study, and the Main Study

Variables/ Instruments	Number of Items	Original Study α	Pilot Study α	Main Study α
Collectivist Orientation (CO)	4	.64	.73	.66
Practice Environment (PES-NWI)	31	N/A	.95	.96
Nurse participation in hospital affairs	9	.83	.89	.92
Nursing foundations for quality of care	10	.80	.84	.91
Nurse manager ability, leadership, and support of nurses	5	.84	.93	.87
Staffing and resource adequacy	4	.80	.86	.79
Collegial nurse-physician relations	3	.71	.90	.82
Organizational Commitment Questionnaire (OCQ)	15	.82 to .93	.90	.83
Anticipated Turnover Scale (ATS)	12	.84	.85	.76

and confirmatory analysis verified the reliability, validity, and generalizability of the scale.

Five stages were used by Lake (2002) to establish the psychometric properties of the PES-NWI. Lake first selected 48 items that focused on nursing practice from the 65-item NWI scale. The consistency of the item selection was verified by a nurse-researcher and a hospital staff-nurse who selected items independently of each other. Second, an exploratory factor analysis was conducted using 1610 nurses in Magnet hospitals, and five factors (subscales) emerged. Because of their salient loading, only 31 items were retained in the final scale. The five subscales were nurse participation in hospital affairs; nursing foundation for quality of care; nurse manager ability, leadership, and support of nurses; staffing and resource adequacy; and collegial nurse-physician relations.

In the third stage, Lake (2002) established the reliability of the scale. Cronbach's alphas for the five subscales and the entire scale using 1610 nurses ranged from .71 to .84. The inter-item correlation coefficients of the subscales with the total scale ranged from .64 to .91. The ICC of the five subscales with the entire scale ranged from .86 to .97. These values provide evidence of scale reliability.

Next, Lake (2002) established the construct validity of the PES-NWI by using a known-groups comparison of the mean scores of the PES-NWI. The compared groups were respondents from Magnet and NonMagnet hospitals. Results showed that, as theoretically predicted, respondents from Magnet hospitals had significantly higher scores than those from NonMagnet hospitals on all subscales and the entire 31 item

PES-NWI. Correlation coefficients among the subscales were moderate (ranging from .34 to .65). Only 2 out of 10 correlation coefficients were higher than .60; therefore, independencies among subscales were supported.

Lake (2002) also used a confirmatory analysis to test the generalizability of the PES-NWI. Results of the analysis showed that only one item migrated to a different subscale and the possible cause was erroneous wording. The generalizibility of the scale was supported.

In the pilot study for this main study conducted by the investigator, the Likert scale of the PES-NWI was modified from four response options to five response options to be consistent with other instruments. The reliability of the PES-NWI was measured by internal consistency. The Cronbach's alpha was .95. Cronbach's alphas for the five subscales of the PES-NWI ranged from .84 to .93 (see Table A3). The validity of the PES-NWI was evidenced by content validity in the pilot study (see Table A6). No modification was made for the main study because of the satisfactory reliability and evidenced validity. In the main study, the Cronbach's alpha was .96. Cronbach's alphas for the five subscales of the PES-NWI ranged from .79 to .92, all of which were higher than those in the original study for scale development (Lake, 2002) (see Table 8).

The Organizational Commitment Questionnaire (OCQ)

The 15-item Organizational Commitment Questionnaire (OCQ) was used to measure nurses' organizational commitment. This questionnaire was developed by Mowday et al. (1979) and was tested from a series of studies of 2,563 employees from nine divergent organizations. The OCQ is a 15-item instrument in which 6 items focus on

employees' affective or attitudinal commitment. Those 6 items are negatively phrased, and their scores are reverse coded. Responses are recorded on a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree).

The original report (Mowday et al., 1979) established the reliability of the OCQ by testing for Cronbach's alpha on the responses of public employees (N = 569), classified university employees (N = 243), hospital employees (N = 382), bank employees (N = 411), telephone company employees (N = 605), scientists and engineers (N = 119), auto company managers (N = 115), and psychiatric technicians (N = 60). Cronbach's alpha values ranged from .82 to .93, with a median of 0.90. Test-retest procedures were performed on 2-, 3-, and 4-month periods and showed high correlation (r = .53 to .75). Item-scale correlations were also conducted, and each item was found to be positively correlated with the total score of the OCQ (ranging from 0.38 to 0.72), with the median correlation coefficient of .64.

The validity of the OCQ was established using many methods. A factor analysis was performed to examine the homogeneity of the OCQ items. The analysis revealed only one factor accounted for 83.2% to 92.6% of the variance of organizational commitment on tested samples. Evidence for convergence validity was indicated by the correlation of OCQ scores with the positive results of the Sources of Organizational Attachment Questionnaire across six diverse samples (r = .63 to .74), intended length of service (r =.51), intrinsic motivation (r = .44), motivational force (r ranged from .35 to .45), work- related central life interest (r ranged from .39 to .43), and the negative results of intention to leave (r ranged from -.31 to -.63).

Discriminant validity was tested by comparing the OCQ scores with job involvement, career satisfaction, and job satisfaction. Results showed that the OCQ scores correlated with job involvement (r = .30 to .56), with career satisfaction (r = .39 to .40), and with job satisfaction (r = .01 to .68). The developers of the OCQ stated that the common variance shared by organizational commitment and other instruments were generally less than 25%. They cautioned, however, that these correlations were too high to be solid evidence of discriminant validity.

The predictive validity of the OCQ was evaluated. Psychiatric technicians were measured for turnover 2, 3, and 4 months after the initial measurement. The results showed no correlation to turnover at initial measurement (r = .02) but negative correlations at 2, 3, and 4 months (r = -.32, -.43, and -.43, respectively). For retail management trainees, the OCQ results were negatively related to turnover on the trainees' first month and after 2 months in the organization (r = -.41, -.43, respectively). The organizational commitment, as measured by OCQ, was also found to be related to employees' tenure, absenteeism, and job performance in predicted directions (Mowday et al., 1979).

In the pilot study for this main study conducted by the investigator, the Likert scale of the OCQ was modified from seven response options to five response options to be consistent with other instruments. The reliability of the OCQ was measured by internal consistency. The Cronbach's alpha was .90 (see Table A3). The validity of the OCQ was evidenced by convergent validity (see Table A5). No modification was made for the main study. In the main study, the Cronbach's alpha was .83. The Cronbach's alphas of the

OCQ in the pilot study and the main study were consistent with the results in the original study for scale development (Mowday et al, 1979) in which the Cronbach's alphas ranged from .82 to .93 with a median of .90 (see Table 8).

The Anticipated Turnover Scale (ATS)

The purpose of the 12-item Anticipated Turnover Scale (ATS) was to measure individuals' perception or opinions toward their voluntarily leaving their present job (Hinshaw & Atwood, 1985). The ATS is a self-report instrument that contains 12 items in Likert format, each with 7 response options ranging from strongly agree (7) to strongly disagree (1).

The ATS, initially developed in 1978 by Hinshaw and Atwood (1985), was tested several times before it was formally adopted for the Anticipated Turnover Among Nursing Staff (ATANS) study. The final version of the ATS was tested by its administration to 1,525 nursing staff members in 15 urban and rural hospitals throughout Arizona. Of those nurses, 63% were registered nurses and 37% were licensed practical nurses or nursing aids. The response rate of the study was 95%. Internal-consistency reliability was estimated using Cronbach's alpha (.84). Construct validity was estimated by using principal component factor analysis. Two factors were identified that explained 54.9% of the variation of the construct.

After the pilot study, the Likert scale of the ATS was modified from seven response options to five response options to be consistent with other instruments. In the pilot study, the reliability of the ATS was measured by internal consistency. The Cronbach's alpha was .85 (see Table A3). The validity of the ATS was evidenced by

convergent validity (see Table A5). No modification was made for the main study because of the satisfactory reliability and evidenced validity. In the main study, the Cronbach's alpha was .76 (see Table 8).

The Demographic Data

The personal background questionnaire asked the Asian nurses to fill in the following information: birth country, country where raised, age, level of education, places of basic and highest nursing education, employment status, tenure in current job, months of working and living in the U.S., type of unit currently working, language preference, self-identity with respect to culture or ethnicity, and years of working as a nurse before practicing in the U.S. Evidence in the research literature indicates that most of these demographic data are related to individuals' cultural orientation, acculturation, attitude toward their job and organization, and intention to leave their current job (Abe-Kim, Okazaki, & Goto, 2001; Arcia, Skinner, Bailey, & Correa, 2001; Chen & Francesco, 2000; DeConinck & Bachmann, 1994; Ingersoll et al., 2002; Lu et al., 2002; McNeese-Smith, 2001; Mendoza, 1989; Suinn, Lew, & Vigil, 1987).

Procedures for Data Collection

Data collection began after approvals of the study were obtained from the Department Review Committee (DRC) and Institutional Review Board (IRB) at The University of Texas at Austin. Potential participants were invited through electronic announcements posted on websites of Asian nursing associations, such as nursing associations for Taiwanese, Philippine, Thai, and Asian and Pacific Islander nurses, as well as websites like Minoritynurse.com. In addition, potential participants were

identified from sources within the investigator's professional network. The recruiters were not paid for their help to the investigators. Ten of the investigator's Asian friends who worked as nurses in the U.S. were contacted first to refer participants to the investigator. During the initial contacts, with these participants, the investigator discussed the purpose of the study, the criteria for participation, the study procedures, and the participants' rights. In addition, recruits and prospective participants were asked to introduce the investigator to other friends who met the study criteria and who might be willing to participate.

For the proposed study, participants who could not access the Internet or who preferred to use paper-and-pen surveys, a packet containing a cover letter and questionnaire (see Appendix C) and a self-addressed-and-stamped envelope were sent by mail. For those who preferred to complete the survey on a computer, the cover letter and questionnaire were sent by e-mail. However, in the main study, only paper-pencil surveys were used. All participants requested to use the paper-pencil form due to its convenience for them. All participants were asked to fill out one demographic data form and a questionnaire package composed of four instruments, a total of 82 items included. The estimated time for the completion of the questionnaire was about 15 minutes. A reminder and another set of questionnaires were mailed once to participants who did not return completed questionnaires within 2 weeks. This data collection was planned to finish within 3 months. An incentive payment of $5 was mailed to participants as a token of appreciation after they completed and returned their questionnaires. In the proposed study, participants' involvement started from their first contact with the investigator and ended

when they returned the questionnaire and acknowledged receipt of the incentive payment to the investigator.

Data Analysis Procedures

All statistical analyses were performed using the Statistical Package for the Social Sciences 12 (SPSS, 2004). The statistical significance level for all research questions was set at $p < .05$. Before conducting descriptive analyses, all data were first examined for accuracy, and then for missing values and normality. Although the preferred method is to have at least two people double-checking the entered data, in this study, all data were entered and double-checked by the investigator due to the limited resources. The Expectation Maximization (EM) algorithm method, which is a general method for maximum likelihood (ML) estimations for missing data, was planed to be used to manage missing values (Allison, 2002; Schafer & Graham, 2002); however, no any missing values were found in these four main instruments. Missing data in the demographic information were not specifically managed because the quantity was limited.

The variables of collectivist orientation, perception of practice environment, organizational commitment, and intention to leave were individually examined for normality using the Shapiro-Wilk (*S-W*) test, the absolute value of skewness, a histogram, and a Q-Q plot. The results supported the normality of perception of practice environment ($S\text{-}W = .99$, $p > .05$) and organizational commitment ($S\text{-}W = .98$, $p > .05$). The variables collectivist orientation ($S\text{-}W = .91$, $p < .001$) and intention to leave ($S\text{-}W = .96$, $p < .01$) had significant values in the S-W test; however, both variables had absolute values of skewness (skewness was -.47 for collectivist orientation and .77 for

intention to leave) less than 1.5, indicating a normal distribution (Munro, 2001). In addition, the histogram and Q-Q plot for intention to leave showed normality. A negative skewness was observed on the histogram and Q-Q plot for collectivist orientation. Because Asian nurses tend to be collectivist oriented, this skewness could be understood and accepted. Therefore, no transformations were made for any of the four variables.

A variety of descriptive statistical techniques were used to analyze the research data. Asian nurses' demographic data were also analyzed using descriptive statistics, such as percentages, means, standard deviations, ranges, and medians, to determine the characteristics of the participants. Inferential statistical analysis was performed to answer the research questions, as follows. In addition, demographic variables that were related to individuals' cultural orientations, attitudes toward their jobs and organizations, and intention to leave their current jobs were also statistically controlled for by including them in the first step in all regression analyses.

Question 1. What are Asian nurses' degree of collectivist orientation, perception of practice environment, organizational commitment, and intention to leave current job?

Descriptive analyses including percentages, means, standard deviations, ranges, and medians were applied.

Question 2. What relationships exist among nurses' collectivist orientation, perception of practice environment, organizational commitment, and intention to leave current job?

Pearson's correlation was used to examine the relationships among these four variables.

Question 3. What relationships exist among nurses' perception of practice environment, organizational commitment, and intention to leave current job with collectivist orientation held constant?

Hierarchical regression was used to determine how much variation in intention to leave the current job could be explained by the perception of practice environment and organizational commitment. In addition, before interpreting the results of the regression analyses, it is important that assumptions (homoscedasticity, linearity, normality, and independence) be tested. They must not be violated to accept the final regression model. Detailed procedures for this data management and the results are described in Chapter 4.

Question 4. Does organizational commitment serve as a mediator of nurses' perception of practice environment and intention to leave?

Three regression analyses proposed by Baron and Kenny (1986) and the Sobel test developed by Sobel (Preacher & Hayes, 2004) were used to determine the mediating effect of organizational commitment on the relationship between perception of practice environment (independent variable) and intention to leave (dependent variable). For Baron and Kenny's method, first, the variations of perception of practice environment on organizational commitment (path A) and on intention to leave (path C), and the variations of organizational commitment on intention to leave (path B) were tested separately, all of which must be significant. Second, the direct relationship between perception of practice environment and intention to leave (path C) was examined by controlling for path A and path B (Bennett, 2000; Baron & Kenny, 1986).

For the Sobel test, a SPSS program developed by Preacher and Hayes (2004) was

applied. First, the effects of perception of practice environment (independent variable) on intention to leave (dependent variable) and organizational commitment (mediator), and the effects of organizational commitment on intention to leave when controlling for perception of practice environment were tested with three regression analyses, all of which must be significant. Second, the indirect effect of the independent variable on dependent variable through the mediator was calculated to test the mediating effect.

Protection of Human Participants

The proposal was reviewed and approved by the Department Review Committee (DRC) and the Institutional Review Board (IRB) for the Protection of Human Participants at The University of Texas at Austin before data collection began. A cover letter and the questionnaire packet were sent by either mail or e-mail to the volunteer Asian nurses who met all criteria and agreed to participate in this study. The cover letter described the rights of participants, the purposes of the study, the risks and benefits of participation, payment, confidentiality information, and the investigator's contact information. No telephone interviews were conducted in this study. By filling out the instruments and turning them back to the investigator, the participants gave their agreement to participate in the study. All participants were informed that they had the right to terminate participation at any time, and they could refuse to answer any question which they were not comfortable. If participants indicated that they wished to know the results of the study, a copy of results will be provided.

The reason the investigator used a cover letter instead of a consent form was that an informed consent that contains participants' names was the only document to connect

the participants with their responses in the saved files. In addition, questionnaires used in the proposed study did not contain any harmful questions or bring any risk to the participants. Therefore, a cover letter rather and implied consent by participants' return of questionnaire than a signed informed consent was appropriate.

All information about individual participants remains confidential. The list of participants' contact information was stored in a file on the primary investigator's personal computer, and only the investigator knew the password to access that personal computer and file. The file of participants' contact information was deleted at the completion of the study. Each returned questionnaire with data was assigned a random number instead of the participant's name. No information that could identify the participant was used. E-mails that may identify participants were deleted after the completed electronic questionnaires were saved on the investigator's personal computer. Again, only the investigator had the password to access that personal computer. Completed paper questionnaires were stored in a locked place accessible only to the investigator. The results of the study are presented as group data rather than as an individuals' information.

Chapter 4: Results

This section presents the data-processing procedures, and results of the descriptive and inferential statistical analyses of the named variables. An alpha level of .05 was set for all statistical analyses. Results are presented for each research question. According to the conceptual framework (see Figure 2), while excluding the demographic variables, the main variables in this study included collectivist orientation, perception of practice environment, organizational commitment, and intention to leave current job that were measured, respectively, by the Collectivist Orientation (CO) scale, the Practice Environment Scale of the Nursing Work Index (PES-NWI), the Organizational Commitment Questionnaire (OCQ), and the Anticipated Turnover Scale (ATS). Cronbach's alphas were used to estimate the internal consistency of each measure. For the CO, PES-NWI, OCQ, and the ATS, reliability coefficients were .66, .96, .83, and .76, respectively, all of which indicate satisfactory reliability (see Table 8).

In the following sections, the results of the descriptive and inferential statistical analyses of the four main variables are presented as they relate to each research question.

Research Questions

Question 1. What are Asian nurses' degrees of collectivist orientation, perception of practice environment, organizational commitment, and intention to leave current job?

Table 9 illustrates the descriptive results of these variables. The 120 study subjects had a mean score of 16.04 (*SD* = 3.37, standardized mean score = 4.01) on collectivist orientation, 109.90 (*SD* = 23.45, standardized mean score = 3.55) on perception of

Table 9

Asian Nurses' Collectivist Orientation, Perception of Practice Environment, Organizational Commitment and Intention to Leave Current Job (N= 120)

Variables (Instrument)	Number of Items	Scale possible range	Test range	Mean	*SD*	Standardized mean score
Collectivism orientation (CO)	4	4-20	4-20	16.04	3.37	4.01
Perception of practice environment (PES-NWI)	31	31-155	40-155	109.90	23.45	3.55
Nurse participation in hospital affairs	9	9-45	11-45	29.94	8.02	3.33
Nursing foundations for quality of care	10	10-50	14-50	37.86	7.58	3.77
Manager ability, leadership, and support	5	5-25	5-25	17.78	4.56	3.56
Staffing and resource adequacy	4	4-20	5-20	13.44	3.60	3.36
Collegial Nurse-physician relations	3	3-15	5-15	10.87	2.53	3.62
Organizational commitment (OCQ)	15	15-75	24-72	54.64	8.74	3.64
Intention to leave (ATS)	12	12-60	17-55	29.42	7.11	2.45

practice environment, 54.64 (*SD* = 8.74, standardized mean score = 3.64) on organizational commitment, and 29.42 (*SD* = 7.11, standardized mean score = 2.45) on intention to leave current job. The mean score for the "nurse participation in hospital affairs" subscale of the Practice Environment Scale was 29.94 (*SD* = 8.02, standardized mean score = 3.33), for the "nursing foundation for quality of care" subscale, the mean score was 37.86 (*SD* = 7.58, standardized mean score = 3.77); for the "nurse manager ability, leadership, and support of nurses" subscale, it was 17.78 (*SD* = 4.56, standardized mean score = 3.56); for the "staffing and resource adequacy", it was 13.44 (*SD* = 3.60, standardized mean score = 3.36); and for the "collegial nurse-physician relations" subscale, it was 10.87 (*SD* = 2.53, standardized mean score = 3.62).

Table 10 illustrates how the levels of collectivist orientation, perception of practice environment, organizational commitment, and intention to leave current job differed by country of origin. The results showed that nurses in the Others group had higher levels of collectivist orientation (*M* = 16.40, *SD* = 3.71, standardized mean score = 4.1). Philippine nurses had the highest levels of perception of practice environment (*M* = 113.19, *SD* = 24.51, standardized mean score = 3.65) and organizational commitment (*M* = 56.29, *SD* = 9.04, standardized mean score = 3.75), but the lowest level of intention to leave current job (*M* = 28.73, *SD* = 6.86, standardized mean score = 2.39). Those differences, however, were not large.

An attempt was made to determine how the measured variables differed by country of origin. Philippine nurses, however, composed more than half of the participants, whereas nurses from some of the other countries were very few (that is, only seven

Table 10

The Levels of Collectivist Orientation, Perception of Practice Environment, Organizational Commitment, and Intention to Leave by Country of Origin (N = 120)

	The Philippines (n_1 = 63)		Korea (n_2 = 7)		India (n_3 = 5)		Others[a] (n_4 = 45)	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Collectivist orientation	15.79	3.25	16.14	2.41	15.80	3.42	16.40	3.71
Perception of practice environment	113.19	24.51	106.86	8.90	107.80	21.27	106.00	23.57
Organizational commitment	56.29	9.04	56.00	8.58	51.80	11.30	52.44	7.75
Intention to leave	28.73	6.86	28.86	6.23	35.00	5.79	29.84	7.60

Note. [a]Others group includes Asian nurses from PROC, Taiwan, Thailand, Vietnam, and Laos.

Korean, five Indian nurses, and 45 others). Because of that imbalance in the sample, any comparison of national groups would have been biased (Howell, 2002; Dancer, class notes, July, 2005; Keyes & Levy, 1997). Therefore, for analysis purposes, the participants were divided into only two groups: Philippine nurses (n = 63) and non-Philippine nurses (n = 57). A t-test was then used to make the comparison. As Table 11 shows, there were no significant differences in collectivist orientation (t[118] = -.85, p > .05, d = .16), perception of practice environment (t[118] = 1.63, p > .05, d = .30), and intention to leave current job (t[118] = -.60, p > .05, d = .11). Philippine nurses were different in level of organizational commitment than non-Philippine nurses (t[118] = 2.20, p < .05, d = .40). According to Cohen (1992), however, the effect size (d = .40) for this difference was small (<.50), meaning that the difference was statistically significant but too small to be practical.

Question 2. What relationships exist among nurses' collectivist orientation, perception of practice environment, organizational commitment, and intention to leave current job?

Table 12 presents the correlations between the tested variables. Intention to leave was negatively correlated with collectivist orientation (r = -.20, p < .05), perception of practice environment (r = -.45, p < .001), and organizational commitment (r = -.64, p < .001). Perception of practice environment was positively correlated with organizational commitment (r = .68, p < .001) and collectivist orientation (r = .30, p < .01), whereas organizational commitment was positively correlated with collectivist orientation (r = .24, p < .01).

Question 3. What relationships exist among nurses' perception of practice environment,

Table 11

Comparisons of Collectivist Orientation, Perception of Practice Environment, Organizational Commitment, and Intention to Leave by Philippine and non-Philippine Nurses

	Philippine Nurses (n = 63)		Non-Philippine Nurses (n = 57)		t	p	d
	M	*SD*	*M*	*SD*			
Collectivist orientation	15.79	3.25	16.1432	3.51	-.85	.40	.16
Perception of practice environment	113.19	24.51	106.26	21.86	1.63	.12	.30
Organizational commitment	56.29	9.04	52.82	8.10	2.20	.03	.40
Intention to leave	28.73	6.86	29.19	6.71	-.60	.55	.11

Table 12

Correlation Coefficients between Variables

	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Collectivist orientation	1												
2. Perception of practice environment	.30**	1											
3. Organizational commitment	.24**	.68***	1										
4. Intention to leave	-.20*	-.45***	-.64***	1									
5. Age	.11	.04	.05	-.22*	1								
6. Years of practice before US	-.05	.09	.10	.00	.32***	1							
7. Years living in the US	.03	-.08	.00	-.21*	.70***	-.15	1						
8. Years practicing in the US	.03	-.04	.04	-.22*	.78***	-.06	.90***	1					
9. Years in current job	.08	-.02	.05	-.13	.65***	-.01	.74***	.83***	1				
10. Language used	-.09	-.00	.07	-.06	-.03	-.17	.18*	.11	.07	1			
11. Language preferred to use	-.04	.03	.12	-.01	-.08	-.13	.10	.01	-.07	.43***	1		
12. Self-identity	.08	.11	.20*	-.35***	.13	-.21*	.25**	.17	.03	.22*	.19*	1	
13. Country being raised	.08	-.03	-.03	-.05	-.04	-.11	.21*	-.06	-.07	.29**	.24**	.19*	1
14. Rating self as Asian/Westernized	-.06	.07	.18*	-.17	.19*	-.19*	.32***	.26**	.15	.24**	.35***	.33***	.19*

*$p < .05$, **$p < .01$, ***$p < .001$

organizational commitment, and intention to leave current job with collectivist orientation held constant?

Selection of independent variables. Hierarchical regressions were performed to determine the relationships among the tested variables. Before the regression analyses, t-tests and Pearson's correlations were performed to identify demographic variables that were related to intention to leave and were to be included in the analysis. Categorical variables (gender, marital status, level of basic education, level of highest education, employment status, and work unit) were first dichotomized to examine their correlation with the dependent variable of intention to leave. T-tests were then used to ascertain the differences between dichotomous demographic variables and intention to leave, and Pearson correlations were used to examine the relationships between demographic interval variables and intention to leave. The demographic interval variables included age, years of practice before coming to the U.S., years living in the U.S., years practicing in the U.S., and years in the current job. Also included in the demographic interval variables were the following five factors: language used, language preferred to use, self-identity, country where the participant was raised, and the participant's self-rating as Asian/Westernized, all of which were regarded in the literature as related to the degree of an individual's acculturation (Abe-kim et al., 2001; Arcia et al., 2001; Suinn et al., 1987).

Pearson's correlations (see Table 12) showed that age (r = -.22, p < .05), years living in the U.S. (r = -.21, p < .05), years practicing in the U.S. (r = -.22, p < .05), and self-identity (self-identified as oriental vs. American, r = -.35, p < .001) were correlated with intention to leave. Those variables were considered for inclusion in the regression

analysis; however, years living in the U.S. was strongly correlated with age (r = .70, p < .001) and years practicing in the U.S. (r = .90, p < .001), and years practicing in the U.S. was also strongly correlated with age (r = .78, p < .001). Such strong correlations suggested a similarity in what those variables measure. Therefore, to avoid high multicollinearity, years living in the U.S. and years practicing in the U.S. were not included in the hierarchical regressions. Rather, age and self-identity were included in the hierarchical regressions and were controlled for by entering them in the first block.

The results of the t-tests (see Table 13) showed that participants' intention to leave did not differ by gender (t[118] = 1.22, p > .05, d = .42), marital status (t[110] = .41, p > .05, d = .09), level of basic nursing education (t[118] = -.83, p > .05, d = .18), level of highest nursing education (t[117] = -.31, p > .05, d = .08), and employment status (t[117] = -.51, p > .05, d = .11). Those nonsignificant differences and small effect sizes indicated no relationships between intention to leave and five demographic variables: gender, marital status, level of basic nursing education, level of highest nursing education, and employment status. Consequently, those five variables were not included in the regression analysis. On the other hand, level of intention to leave current job differed by work unit practiced (t[118] = 2.14, p < .05, d = .43), so that work unit was included in the regression analysis. For this hierarchical regression analysis, therefore, age, work unit, and self-identity were entered in the first block, collectivist orientation was entered in the second block, and perception of practice environment and organizational commitment were entered in the third block to predict intention to leave current job.

Testing assumptions for regression. Before the results of the regression analysis

Table 13

T-Tests on Intention to Leave Current Job by Demographic Variables

	n	*M*	*SD*	*t*	*p*	*d*
Gender				1.22	.23	.42
Female	107	29.69	7.35			
Male	13	27.15	4.32			
Marital status				.41	.69	.09
Single/divorced	27	29.78	7.84			
Married	85	29.15	6.69			
Level of basic nursing education				-.83	.41	.18
Lower than BS	33	28.55	5.70			
BS or higher	87	29.75	7.58			
Level of highest nursing education				-.31	.76	.08
Lower than BS	20	28.95	6.35			
BS or higher	99	29.49	7.31			
Employment status				-.51	.61	.11
Part time	21	28.52	8.00			
Full time	98	29.35	6.48			
Work unit				2.14	.04	.43
Intensive and Med/surg units	86	30.27	7.07			
Non-intensive units	34	27.26	6.86			

were interpreted, assumptions (homoscedasticity, linearity, normality, and independence) for regression were tested. A scatter plot of the residuals against the predicted values of dependent variable was used to test homoscedasticity and linearity. To meet the assumption of homoscedasticity, the residuals should distribute randomly around the line when residuals are 0 (Stevens, 1996). In this study, the results from the scatter plot of the residuals against the predicted dependent variable showed that the assumptions of homoscedasticity and linearity of the data were met.

Histograms and Q-Q plots of residuals rather than individual variables were examined to confirm the normality assumption. The reason for using plots of residuals rather than individual variables was that an examination of the normality of every single variable could not identify the distribution of a combination of predictors in the model (Hutcheson & Sofroniou, 1999). Results from the histogram and Q-Q plot of the residuals in this study showed that the assumption of normality of the data was met.

The Durbin-Watson value of Studentized residuals was used to test the assumption of independence. The Durbin-Watson value was set within an interval of 1.5 to 2.5 (Hutcheson, & Sofroniou, 1999). Results of the analysis in this study showed that the Durbin-Watson value was 2.27, which indicated the independence of the variables.

Multicollinearity is the degree that the predictors in a model are intercorrelated. In a regression analysis, high multicollinearity may increase the standard errors of estimated regression coefficients and hence lead to unstable prediction equations (Petraitis, Dunham, & Niewiarowski, 1996; Steven, 1996). In addition, high multicollinearity may limit the values of the multiple correlation coefficients, which in turn makes it difficult to

determine the importance of predictors (Steven, 1996). Therefore, multicollinearity should be checked before a multiple regression is performed.

To test the presence of multicollinearity in a regression analysis, the tolerance of variables and variance inflation factors (VIF) are used (Steven, 1996). The tolerance is the proportion of the variance in a variable that is not accounted for by the other independent variables, whereas the VIF is the reciprocal of tolerance (SPSS, 1999). A number smaller than 2 is used as a cutoff point of VIF because significant impacts are found when the VIF is as high as 2 (Graham, 2003). The tolerance, which is calculated by $1 - R^2$, where R refers to the multiple correlation coefficient, should be larger than .1 to rule out the possibility of multicollinearity (Hair, Anderson, Tatham, & Black, 1995). In the current study, the VIF values were all smaller than 2 (ranging from 1.03 to 1.98), and values of tolerance were all larger than .1 (range from .50 to .92). Thus, multicollinearity was not considered a problem in this analysis.

Results of the regression. The results of the regression are reported in Table 14. In Model 1, age, work unit, and self-identity accounted for 14.2% (adjusted R^2) of the variation of intention to leave current job (F[3, 116] = 7.57, $p < .001$). Both age (t = -1.99, $p < .05$) and self-identity (t = -3.43, $p < .01$) had significant regression coefficients in predicting intention to leave current job. In Model 2, collectivist orientation added another 1.8% (adjusted R^2) of explanation to intention to leave current job; however, it did not have a significant regression coefficient (t= -1.88, $p > .05$). In Model 3, both organizational commitment and perception of practice environment added another 30.1% (adjusted R^2) of explanation to intention to leave current job. Organizational commitment

Table 14

Regression Models for Intention to Leave Current Job

	Model 1				Model 2				Model 3				Restricted model			
	B	*β*	*t*	*p*	*B*	*β*	*t*	*p*	*B*	*β*	*t*	*p*	*B*	*β*	*t*	*p*
Age	-.13	-.17	-1.99	.049	-.12	-.16	-1.82	.07	-.12	-.15	-2.26	.03	-.12	-.16	-2.33	.02
Work unit	1.94	.12	1.42	.16	1.99	.13	1.47	.14	.15	.01	.14	.89	-	-	-	-
Self-identity	-2.36	-.30	-3.43	.001	-2.27	-.29	-3.33	.00	-1.61	-.20	-2.90	.00	-1.62	-.21	-3.00	.00
	R^2 = .164 (.142)[a] F = 7.57, p < .001															
Collectivist orientation					-.34	-.16	-1.88	.062	-.05	-.02	-.32	.75	-	-	-	-
					R^2 = .189 (.160)[a] F = 6.69, p < .001 R^2 change[b] = .025 (.018)[a] F change[c] = 3.54, p = .062											
Perception of practice environment									-.01	-.02	-.18	.86	-	-	-	-
Organizational commitment									-.47	-.58	-6.07	.00	-.48	-.59	-8.75	.00
									R^2 = .488 (.461)[a] F = 17.96, p < .001 R^2 change[b] = .299 (.301)[a] F change[c] = 33.05, p < .001				R^2 = .487 (.474)[a] F = 36.76, p < .001 R^2 change[b] = -.001 (.013)[a] F change[c] =.91, p > .05			

Note. Sample size for the analysis is 120. [a]Number in the parentheses is adjusted R^2. [b]R^2 change means the R^2 changes from the previous model to the current model. [c]F change means the F value for R^2 change.

had a significant regression coefficient (t = -6.07, p < .001). Perception of practice environment, however, did not have a significant regression coefficient (t = -.18, p > .05) and was excluded from the regression model. As a result, age, self-identity, and organizational commitment were left in Model 3 (the original model).

To achieve a parsimonious model, an additional regression analysis (restricted model) was performed that excluded the variables of work unit, collectivist orientation, and perception of practice environment, none of which had shown significant regression coefficients (see Table 14). The formula $F = (\Delta R^2/r)/[(1 - R^2)/(n - k - 1)]$ was used to test whether the change of R^2 from that of the original model to that of the restricted model was significant (Wonnacott & Wonnacott, 1986). The r in the formula denotes the number of predictors that are excluded, n is sample size, and k is the total number of predictors in the original model (Model 3 in the above analysis). The results showed that the restricted model, which included age, self-identity, and organizational commitment as predictors, could explain 47.4% (adjusted R^2) of the variation in intention to leave current job (F[3, 116] = 36.76, p < .001). The R^2 change from the original model (Model 3 in the above analysis, R^2 = .461) to the restricted model (R^2 = .474) was .013, and the F for testing the significance of this R^2 change was .91 (p > .05). Therefore, excluding the nonsignificant variables (work unit, collectivist orientation, and perception of practice environment in this analysis) did not cause a significant change in R^2 in the restricted model. Consequently, age, self-identity, and organizational commitment were included in the restricted model for intention to leave current job (see Table 14).

Question 4. Is organizational commitment a mediator of nurses' perception of practice

environment and intention to leave?

A mediator is a variable that accounts for the relation between a predictor and a dependent variable. Baron and Kenny (1986) proposed that three paths depict the relationships between a predictor, mediator, and dependent variable: direct effects of predictor on mediator (Path A), direct effects of mediator on dependent variable (Path B), and direct effects of predictor on dependent variable (Path C). To show the mediating effects, Path A, Path B, and Path C must first exist. Second, when Paths A and B are controlled, Path C becomes insignificant. If the effects of the predictor on the dependent variable (Path C) become zero, the mediator has a complete mediating effect.

The Sobel test, which has higher statistical power than the method proposed by Baron and Kenny (1986), was developed by Sobel for testing the indirect effect of an independent variable on a dependent variable through a mediator (Preacher & Hayes, 2004). In the current study, the method proposed by Baron and Kenny and a SPSS program for the Sobel test (Preacher & Hayes, 2004) were both applied. The predictor in this analysis was perception of practice environment, the mediator was organizational commitment, and the dependent variable was intention to leave current job.

Based on Baron and Kenny (1986), the first step to test the mediating effects is to examine whether Paths A (predictor to mediator), B (mediator to dependent variable), and C (predictor to dependent variable) exist. Three regression analyses were performed to test those assumptions (see Table 15). The results showed that, for Path A, perception of practice environment accounted for 46% of the variation of organizational commitment ($F[1, 118] = 102.43$, $p < .001$). For Path B, organizational commitment accounted for

Table 15

Testing Mediating Effects by Regressions

Paths	R^2	F	p	B	β	t	p
A. Practice environment → organizational commitment	.46	102.43	<.001	.25	.68	10.12	<.001
B. Organizational commitment → intention to leave	.41	83.73	<.001	-.52	-.64	-9.15	<.001
C. Practice environment → intention to leave	.19	29.26	<.001	-.14	-.45	-5.41	<.001
Practice environment → Intention to leave	.41	41.52	<.001	-.004	-.01	-.13	.90
Organizational commitment → Intention to leave				-.52	-.64	-6.58	<.001

41% of the variation of intention to leave current job (F[1, 118] = 83.73, p < .001). For Path C, perception of practice environment accounted for 19% of intention to leave current job (F[1, 118] = 29.26, p < .001). Because all three paths (A, B, and C) existed, the first criterion in the test for a mediating effect was met.

Second, to indicate a mediating effect, Path C should become insignificant when Paths A and B are controlled (Baron & Kenny, 1986). The results from a regression analysis showed that, while both organizational commitment and perception of practice environment were used as predictors to predict intention to leave, the regression coefficient of perception of practice environment was not significant (t = -.13, p > .05).

The results from the Sobel test program (Preacher & Hayes, 2004) also showed that the effect of perception of practice environment on intention to leave current job (t = -5.41, p < .001), the effect of perception of practice environment on organizational commitment (t = 10.12, p < .001), and the effect of organizational commitment on intention to leave current job when controlling for perception of practice environment (t = -6.58, p < .001) were all three significant. The results from the next step of the Sobel test showed that the effect of perception of practice environment on intention to leave current job was not significant (t = -.13, p > .05) when controlling for organizational commitment. The indirect effect of perception of practice environment on intention to leave current job through organizational commitment was -.13 (Z = -5.50, p < .001), which indicated that organizational commitment had a mediating effect on the relationship between perception of practice environment and intention to leave current job.

Summary

In general, Asian nurses had a median to high degree of collectivist orientation, perception of their practice environment, and commitment to their organization, but low intention to leave their current job. All relationships among the four major variables were consistent with the proposed model for this study (see Figure 2). All independent variables, including collectivist orientation, perception of practice environment, and organizational commitment, had positive associations to each other; yet, they all had negative correlations with the dependent variable, intention to leave current job.

In addition, the regression analyses showed that, in the prediction of Asian nurses' intention to leave current job, organizational commitment could explain 41% (p <.001) of the variation of intention to leave, and perception of practice environment could account for 19% (p <.001) of the variation of intention to leave. However, a more parsimonious model was developed after a hierarchical regression analysis of the data. By controlling for selected demographic data and the variable of collectivist orientation and by regressing intention to leave on both organizational commitment and perception of practice environment, the study showed that the effect of perception of practice environment on intention to leave became insignificant. Therefore, three variables—age, self-identity, and organizational commitment—were included in the restricted model.

Further tests were conducted on the mediating effect of organizational commitment on the relationship between perception of practice environment and intention to leave. Those tests, the Sobel test and one proposed by Baron and Kenny, both indicated a mediating role for organizational commitment. Moreover, the Sobel test indicated an indirect effect of perception of practice environment on intention to leave current job.

Chapter 5: Discussion

Introduction

This chapter summarizes the study and then discusses issues regarding the recruitment strategies, the sample, and the instruments. The chapter then describes the findings, conceptual framework, and study implications. Recommendations for practice, education and research are described, as well as, the limitations of the study.

Study Summary

The purpose of this study was to investigate the work circumstances of Asian registered nurses in U.S. hospitals and to explore the relationships among the four major variables, including collectivist orientation, perception of practice environment, organizational commitment, and intention to leave the current job, as those variables pertain to the Asian nurses. To guide the study, a temporally ordered, recursive model (see Figure 2) was developed incorporating the four variables. The linkages between the variables in the figure were supported by evidence from a critical literature review. This study differs from previous studies in that it explores Asian nurses' intention to leave the current job from three perspectives: cultural (i.e., collectivist orientation), attitudinal (i.e., perception of practice environment and organizational commitment), and decisional (i.e., intention to leave). In this hypothetical model, the variables of collectivist orientation, perception of practice environment, and organizational commitment are independent variables. Those variables are assumed to be negatively associated with intention to leave, which is the dependent variable.

Four research questions were formulated to guide the analysis of the survey data collected by e-mail or paper-pencil questionnaires. The data-collection packages included four instruments—the Collectivist Orientation (CO) Scale, Practice Environment Scale of the Nursing Work Index (PES-NWI), Organizational Commitment Questionnaire (OCQ), and Anticipated Turnover Scale (ATS)—as well as one demographic sheet. Only the English versions of the instruments were used, and all instruments were tested for satisfactory reliability and validity in a pilot study before their use in the current study.

The study was designed to provide descriptive statistical data for analysis. To acquire that data, a snowball sampling method and a set of recruitment criteria were applied to the identification and selection of participants. Because the participants received the surveys by mail or e-mail, they were able to complete the questionnaire at their convenience. A total of 120 subjects was recruited. That sample size was determined adequate by the nQuery program, that calculated the sample size estimation based on results of a pilot study. Data collection began after approval of the study was obtained from the Institutional Review Board (IRB). Potential participants were identified by and referred from sources within the investigator's professional network.

Before starting the data analysis, the investigator double-checked all data for accuracy. No missing data were found in the results of the four instruments, and all data sets showed normal distributions. Checks also showed that the assumptions for regression analysis were met, including homoscedasticity, linearity, normality, and independence of variables. Moreover, no high levels of multicollinearity were found among the independent variables. The descriptive analyses included the determination of means,

standard deviations, ranges, percentages and medians. Pearson's correlation was used to examine the relationships among the four variables. Hierarchical regression was used to examine the degree of variation in intention to leave current job that could be explained by the variables of perception of practice environment and organizational commitment. Three regression analyses and the Sobel test were used to check the mediating effect of organizational commitment on the relationship between perception of practice environment and intention to leave.

The major results of the study and issues concerning the conceptual framework are discussed in the following sections.

Recruitment Strategies and Sample

Recruitment Strategies

The pilot study for the research described in this dissertation showed that the e-mail and paper-pencil surveys had similar response quality; however, other researchers have proposed that those two survey methods have different advantages and disadvantages (Mehta & Sivadas, 1995; Schafer & Dillman, 1998; Tse, 1998). E-mail surveys may be able to cover broader geographic areas and have quicker responses, whereas they also may have lower response rates and limited coverage of certain demographic populations that do not have access to the Internet. The supplemental use of a paper-pencil survey could compensate for the disadvantages of the e-mail survey, and in fact a survey method that combined e-mail and paper-pencil questionnaires has been proposed for research (Schafer & Dillman, 1998). In this study, however, participants who were either contacted personally by the investigator or who were referred by the

investigator's professional network all requested to use the paper-pencil form of the questionnaire. In that manner, 120 complete data sets were collected within two months and from six states, for a response rate of 74.5%. The result indicates that the paper-pencil survey was an appropriate way to recruit Asian nurses working in the U.S.

Moreover, during the personal contacts by the investigator while collecting data, some Asian nurses expressed that they seldom used e-mail, had forgotten their e-mail account address, did not have time to check their e-mail, or did not even have an e-mail account. Some explained that the paper form of the questionnaire was convenient for them to fill out any time and any place. In sum, the selection of participants who had been referred through a professional network and the use of paper-pencil surveys seemed to be appropriate strategies for recruiting Asian nurses.

Sample

Of the 120 participants, 45 were needed in the 'others' ethnic group. The number of participants in the nationality of the others group, ranked from the most to the least, were Chinese nurses, including nurses from China and Taiwan (N = 37); Thai nurses (N = 5); Vietnamese nurses (N = 2); and Laos nurses (N = 1). The others group contained no Japanese, Indonesian, or Malaysian nurses. The reason for the constituency of the others group may be, first, that the investigator is from Taiwan and naturally her professional network in the U.S. is more likely to comprise Chinese nurses because they speak the same language. As a result, most participants referred through this professional network shared the same ethnicity. Second, because convenience sampling was used for this study, the sample could not be expected to have normal distributions for all ethnicities. Thus,

the sample may have only limited representativeness of the desired population.

In addition, Asian RNs in the current study were highly educated (with 80.8% having bachelors or higher degrees in nursing). Most were employed full-time (81.7%) and worked in intensive care (46.7%) and Med/Surg (25%) units. Those findings were congruent with the investigation by DHHS (2006). Generally, however, Asian nurses with at least a BSN degree would be more likely to be employed by U.S. hospitals. Compared to other work units, critical care and Med/Surg units seem to always need more nurses, and most hospitals need more full-time nurses to provide higher quality care to patients. For those reasons, Asian nurses have gradually become a large portion of the nursing workforce in U.S. hospitals, especially during the current period of nursing shortage.

Another observation from this study is that there were eight times more female Asian nurse participants (N = 107) than male Asian nurse participants (N = 13). The reason for that disparity might be that nursing is regarded as "woman's work." Male nurses are still not popularly accepted in the traditional views among Asian people, so that fewer male students would choose the nursing profession as their career.

When research turns to immigrants living in a host country, acculturation becomes an important topic. Cultural studies have proposed that the most robust indicators of acculturation are language use (Marks et al., 1987; Mendoza, 1989) and length of residence in the host country (Arcia et al., 2001; Leclere, Jensen, & Biddlecom, 1994). In this study, the average length of residence in the U.S. among the Asian nurses was 12.93 years (ranging from 1 to 36 years). Of those Asian nurses, 96 (80.0%) used their mother language and English about equally, and 86 (71.7%) preferred to use their mother

language and English about equally. Regardless of language and the length of residence in the U.S., however, they still self-identified themselves as oriental/Asian (N = 88, 73.3%), rated themselves as very Asian/mostly Asian (N = 83, 69.2%), and had a high level of collectivist orientation. Those results imply that the Asian nurses had not yet become acculturated and had retained the characteristics of a collectivist culture in their personal outlook, despite their lengthy residence in the U.S.

Instruments

Both the pilot study and the current study provided evidence that the reliability and validity of the instruments were satisfactory. Researchers suggest that, for acceptable reliability, an instrument should have a Cronbach alpha of .70 or higher (Robinson, Shaver, & Wrightsman, 1991). In the pilot study, the Cronbach's alphas for the CO scale, PES-NWI, OCQ, and the ATS were .73, .84 to .95, .90, and .85, respectively. In the main study, they were .66 for the CO Scale, .96 for the PES-NWI, .83 for the OCQ, and .76 for the ATS. The lower Cronbach's alpha for the CO scale may be due to its having only four items in the scale. The Cronbach alphas for the instruments in their original developmental studies were .64 for the CO scale, .71 to .84 for the PES-NWI five subscales, .82 to .93 for the OCQ, and .84 for the ATS. Therefore, the four instruments have consistently satisfactory reliability, and they can be appropriately applied to a study of the Asian nurse population.

Findings Regarding Collectivism Orientation, Perception of Practice Environment, Organizational Commitment, and Intention to Leave

The results of this study indicated that intention to leave current job among Asian

nurses working in U.S. hospitals was associated with collectivist orientation, perception of practice environment, and organizational commitment. The major findings are discussed below in terms of the relationships among the variables within the framework of the conceptual model.

Collectivist Orientation and Perception of Practice Environment

In the model, collectivist orientation was hypothesized to have a positive association with perception of practice environment, and that hypothesis was supported by the data. A significantly positive relationship between the two variables revealed that a stronger perception of a satisfactory practice environment was related to a higher degree of collectivist orientation. In the current study, the Asian nurses were highly collectivist-oriented (M = 16.04, SD = 3.37, standardized mean score = 4.01), and that finding corresponded with those of other studies in industrial settings in which Asian employees exhibited strong characteristics of a collectivist orientation (Parkes, Bochner, & Schneider, 2001; Thomas & Au, 2002; Wang et al., 2002). Asian nurses were generally satisfied with their current practice environment (M = 109.90, SD = 23.45, standardized mean score = 3.55). Overall, 57.6% of them answered "slightly agree/strongly agree" in their satisfaction with present practice environment. That finding was similar to those of the Asperilla (1976) and Berg et al. (2004) studies in which Filipino nurses who worked in U.S. hospitals felt highly satisfied with their present jobs (felt good/very good: 51%, Asperilla; 91.2%, Berg et al.). That result was different from that of a survey (HCAB, 2001) investigating American nurses' job satisfaction in which 51% of RNs described themselves as somewhat dissatisfied with their current jobs, and 28% were very

dissatisfied. Compared to the nurses in Lake's (2002) study, the Asian nurses in the current study perceived their practice environment with greater satisfaction than did nurses working in U.S. non-Magnet hospitals, but with less satisfaction than did nurses working in U.S. Magnet hospitals. In addition, many studies conducted in industrial settings found a positive relationship between collectivist orientation and job satisfaction (Hui, Yee, & Eastman, 1995; Kirkman & Shapiro, 2001; Thomas & Au, 2002).

Within the five subscales of the PES-NWI, which measured nurses' perception of their practice environments, the category perceived with the most satisfaction by Asian nurses was nursing foundations for quality of care (M = 37.86, SD = 7.58, standardized mean score = 3.77), followed by collegial nurse-physician relations (M = 10.87, SD = 2.53, standardized mean score = 3.62). It is worth noting that the variance in the scores of nurse-physician relations was much less than it was in nursing foundations for quality of care. That difference indicated that Asian nurses were more uniform in their perceptions of collegial nurse-physician relations than they were in their perceptions of nursing foundations for quality of care. That result was congruent with the attributes of collectivism described by Triandis (1995); that is, in collectivist cultures, individuals have a high regard for relationships within groups, and as a result the memberships of groups are more stable. The category perceived with the least satisfaction in the PES-NWI was nurses' participation in hospital affairs (M = 29.94, SD = 8.02, standardized mean score = 3.33), followed by staffing and resource adequacy (M = 13.44, SD = 3.60, standardized mean score = 3.36).

Of those two variables, however, staffing and resource adequacy draws more

attention because its standard deviation indicates much less variance, which indicates that the concerns of Asian nurses on staffing and resource adequacy in their present jobs were fairly similar. During a nursing shortage, staffing and resource adequacy is especially worrisome because it directly and strongly affects the quality of patient care (AHRQ, 2004; Aiken et al., 2002; Curtin & Simpson, 2000; DHHS, 2001; JCAO, 2002; Needleman et al., 2002).

Collectivist Orientation and Organizational Commitment

In the proposed model, collectivist orientation was hypothesized to have a positive relationship with organizational commitment, and that hypothesis was supported. In this study, Asian nurses revealed a high degree of organizational commitment (M = 54.64, SD = 8.74, standardized mean score = 3.64) and collectivist orientation. The correlation between the two variables was significant (r = .24, p<.01), which indicated that Asian nurses who are more collectivist-oriented are more willing to accept the goals and values of the organization, exert effort on behalf of the organization, and maintain organizational membership. That finding confirmed the attributes of collectivism defined by Triandis (1995); that is; most collectivists regard their own goals as being congruent with those of a particular group. In collectivist cultures, once individuals join and accept their membership in a group, they subordinate their personal goals to the goals of that group, and they are more willing to cooperate with the group members (Wang et al., 2002).

That finding corresponds to those from many other studies. For example, in two qualitative studies (Spangler, 2001; McNeese-Smith, 2001), Filipino nurses reported that, perhaps because of their Oriental work ethic, they regarded their job as a duty, obligation,

a matter of conscience, and a commitment. Moreover, they would cooperate with and adhere to the healthcare systems in which they practiced. In addition, many empirical studies in industrial settings proposed either that collectivist orientation was positively associated with organizational commitment (Clugston, Howell, & Dorfman; 2000; Moorman & Blakely, 1995; Wang et al., 2002) or that collectivists were more committed to their organization than individualists (Al-Meer, 1989; Parkes, Bochner, & Schneider, 2001; Ramamoorthy & Flood, 2004; Wasti, 2003). A logical conclusion from those findings is that individuals with collectivist orientation are more likely to have a positive view of commitment to their organizations when they perceive their organization as their ingroup.

Perception of Practice Environment and Organizational Commitment

In the proposed model, perception of practice environment was hypothesized to have a positive relationship with organizational commitment, and that hypothesis was supported by the data. No single previous study has focused on both perception of practice environment and organizational commitment. Rather, either perception of practice environment has been used to measure nurses' job satisfaction, or job satisfaction has been regarded as an outcome of perception of practice environment. Therefore, this next section uses job satisfaction as synonymous with perception of practice environment in the discussion of its relationship with organizational commitment.

In this study, Asian nurses' perception of practice environment was positively and significantly correlated to organizational commitment (r = .68, p<.001). Perception of practice environment also explained 46% of the variation of organizational commitment

(F[1, 118] = 102.43, p < .001). Those findings were consistent with those of previous studies conducted among non-Asian nurses (Knoop, 1995; Lok & Crawford, 2001) or workers in industrial settings (Harrison & Hubbard, 1998; Gaertner, 1999; Testa, 2001; Yoon & Thye, 2002), all of which proposed that job satisfaction was significantly and positively correlated to organizational commitment, or that job satisfaction was a significant predictor or antecedent of organizational commitment. Such associations are plausible because employees will respond with positive attitudes and commitment to their organizations when they are satisfied with their work environment. Some studies, however, had different findings in that they indicated no causal effect in either direction between job satisfaction and organizational commitment (Curry et al., 1986), or they showed reciprocal causal relations between job satisfaction and organizational commitment (Farkas & Tetric, 1989). In addition, Wasti's study (2003b) provided different results regarding the prediction of organizational commitment. That study pointed out that, for collectivists, satisfaction with the relationships of the ingroup was a significant antecedent in predicting organizational commitment; yet, for individualists, perception of job enjoyment was the only significant factor in predicting commitment.

Perception of Practice Environment and Intention to Leave

In the proposed model, the perception of practice environment was hypothesized to be negatively related to intention to leave current job. That hypothesis was supported as follows. In the study, Asian nurses were generally satisfied with their present practice environment. They also revealed low intention to leave their current job (M = 29.42, SD = 7.11, standardized mean score = 2.45). The correlation between those two variables was

significantly negative (r = -.45, p<.001). Those results implied that Asian nurses who were more satisfied with their practice environments reported less intention to leave their present jobs. In addition, perception of practice environment accounted for 19% of the variation of intention to leave (F[1, 118] = 29.26, p < .001). These findings were congruent with those of a nursing study (Lu et al., 2002) conducted in Taiwan, an Asian country, and three other nursing studies (Shader et al., 2001; Cavanagh & Coffin, 1992; Larrabee et al., 2003) conducted in the U.S. In addition, two studies (Hellman, 1997; Lambert et al., 2001) conducted in a non-nursing field showed similar results.

Job dissatisfaction has traditionally been regarded as the major factor causing high nurse turnover or intention to leave a current job (GAO, 2001; HCAB, 2001; Aiken et al., 2002; Khowaja et al., 2005). It is reasonable to suppose that nursing is a highly autonomous profession because nurses are first-line healthcare providers who have to manage patients in emergency situations before physicians arrive. Hospitals that provide a professional and supportive work atmosphere give registered nurses the latitude to maintain control over the delivery of nursing care, and the environment in which care is delivered. Such supportive professional environments satisfy the nurses' needs as they care for patients, and they help attract and retain professional nurses.

Organizational Commitment and Intention to Leave

In the proposed model, organizational commitment was hypothesized to be negatively related to intention to leave current job. In this study, organizational commitment not only had a strong and negative relationship with intention to leave (r = -.64, p<.001), but it also was the strongest predictor of intention to leave (β = -.58, t =

-6.07, p <.001), explaining 41% of the variation in intention to leave. These findings suggest that Asian nurses who have higher levels of commitment to the organization also report a lower intention to leave their present jobs. This result corresponds with those of previous studies in nursing, namely, a study in Singapore (Fang, 2001) which is a collectivist-oriented country, and three studies in Western countries (Lynn & Redman, 2005; Ingersoll et al., 2002; Somers, 1995). Also showing similar results were five studies conducted in non-nursing professions, two in Asia (Wasti, 2003a; Chen & Francesco, 2000) and three in the U.S. (Jaramillo et al., 2005; Kacmar et al., 1999; Shore et al., 1990).

Organizational commitment is an attitude that reflects the individual's strength of identification with and involvement in a particular organization (Porter et al., 1974). Collectivists are characterized by their emphasis on behaviors aligned with group norms and duties rather than with their own pleasure or personal advantage, and by a willingness to cooperate with ingroup members (Triandis, 1995). In this study, therefore, the Asian nurses, who were highly collectivist-oriented, were likely to display a strong attitudinal commitment to an organization, which implies that they were more likely to accept the goals and values of the organization and evince a strong desire to maintain membership with the organization. Thus, it could be supposed that they would have less intention to leave their jobs.

Traditionally, nursing research into factors of nurse turnover or intention to leave has focused more on nurses' perception of their practice environment or job satisfaction (for example, Cavanagh & Coffin, 1992; Shields & Ward, 2001). Little research has

regarded organizational commitment as a major predictor of nurse turnover behaviors. Even less research has targeted Asian nurses specifically on that topic. By focusing on organizational commitment among Asian nurses, therefore, the current study has been able to provide evidence that is especially important when one considers that Asian nurses are becoming the majority of international nurses in U.S. hospitals. Moreover, by revealing the association of organizational commitment with the attributes of collectivist orientation, the study has confirmed that commitment to a group or an organization is a cultural behavior of collectivists.

Many studies in industrial settings have indicated the importance of organizational commitment to the prediction of Asian people's intention to leave their current jobs. For that reason, healthcare administrators who employ Asian nurses should think deeply about ways to capitalize on this cultural behavior among the Asian nurses to ensure their willingness to work for the benefit of the organization.

Perception of Practice Environment, Organizational Commitment, and Intention to Leave

In the proposed model, organizational commitment was hypothesized to be the mediator of the relationship between perception of practice environment and intention to leave. The results reveal that, when analyzed separately, both perception of practice environment (β = -.45, t = -5.41, p<.001) and organizational commitment (β = -.64, t = -9.15, p<.001) could strongly predict the variable of intention to leave. However, when those two predictors were tested simultaneously to predict the criterion variable, the prediction ability of perception of practice environment became insignificant. Nevertheless, findings show an indirect effect of perception of practice environment on

intention to leave through organizational commitment. That evidence suggests that organizational commitment is not only the strongest predictor of intention to leave, but it also works as a mediator between perception of practice environment and intention to leave. Those findings are consistent with those of previous studies, including one in nursing (Lum et al., 1998) and five in non-nursing fields (Aryee et al., 1991; Brown & Peterson, 1993; DeConinck & Bachmann, 1994; Gregson, 1992; Williams & Hazer, 1986). Other studies, however, have produced different findings. Tett & Meyer (1993), for instance, showed that job satisfaction and organizational commitment could each predict intention to leave independently, and Currivan (1999) found no causal effects between job satisfaction and organizational commitment.

Findings from the current study suggest a greater role for organizational commitment than for perception of practice environment (job satisfaction) in prediction of intention to leave among Asian nurses. According to Mowday et al. (1979), however, organizational commitment is a broader concept than job satisfaction, which focuses only on the individual's feelings toward the job itself or the task environment. Organizational commitment is thought to develop slowly but consistently over time, whereas job satisfaction is less stable, is not so bound by time and space, and is apt to be influenced by environmental factors such as the quality of work benefits.

Healthcare administrators should understand that **c**ommitment is a high-level psychological and social attachment to someone or a group (Alexander & Tyree, 1996), and organizational commitment is a general affective stance toward the organization as a whole (Mowday et al., 1979). For collectivist-oriented Asian people, a group is where

people live together as in a family. Members in the family are committed to making sacrifices for the good of the group. Therefore, once commitment exists, it empowers individuals and stabilizes their behavior under different circumstances, and the general effect is stability in the family or organization.

Findings Regarding Conceptual Framework

In general, the conceptual framework used to guide the current study was supported by the results of the data analysis. First, collectivist orientation, perception of practice environment, and organizational commitment, which were the independent variables, were hypothesized to have positive relationships among each other. Perception of practice environment and organizational commitment were hypothesized to have direct negative associations with intention to leave, the dependent variable. The results from Pearson's correlation analyses showed that collectivist orientation was positively associated with the variables of perception of practice environment ($r = .30$, $p < .01$) and organizational commitment ($r = .24$, $p < .01$), but negatively related to intention to leave ($r = .20$, $p < .05$). However, the prediction of collectivist orientation on intention to leave was not significant ($t = -1.88$, $p > .05$). Meanwhile, perception of practice environment ($r = -.45$, $p < .001$) and organizational commitment ($r = -.64$, $p < .001$) were both negatively correlated to intention to leave. Therefore, the hypothesis was supported.

Second, perception of practice environment and organizational commitment were hypothesized to predict Asian nurses' intention to leave current job. The results from hierarchical regressions showed that those two independent variables, taken jointly, could explain 31.4% of the variation of intention to leave current job. Taken separately,

however, they could explain 19% (perception of practice environment) and 41% (organizational commitment) of the variation on intention to leave. Thus, the hypothesis was supported.

Third, organizational commitment was hypothesized to have a mediating effect on the relationship between perception of practice environment and intention to leave. The results show that the predictions of perception of practice environment on organizational commitment (B = .25, t = 10.12, p <.001) and on intention to leave (B = -.14, t = -5.41, p <.001) and the prediction of organizational commitment on intention to leave (B = -.52, t = -9.15, p <.001) were all significant when they were tested separately (see Table 14). However, the predictive ability of perception of practice environment on intention to leave became insignificant when regressed simultaneously with the variable of intention to leave on both the perception of practice environment (B = -.004, t = -.13, p > .05) and organizational commitment (B = -.52, t = -6.58, p <.001). In addition, the Sobel test revealed that perception of practice environment had an indirect effect on intention to leave through organizational commitment. Therefore, this hypothesis was supported.

A limitation of this study was that it did not have a sample size large enough for more advanced statistical tests of the model. In the current study, the investigator used a regression analysis, which relies on correlations between variables and the notion of a straight line, to develop a prediction model. Without testing the model, the prediction ability of the proposed model could not be cross-validated. A statistical technique such as structural equation model (SEM) testing would be helpful to confirm the relationships among variables.

Implications and Recommendations

Practice and Administration

In general, the Asian nurses in this study were collectivist in orientation (M = 16.04, SD = 3.37). Because of the influx of Asians into the ranks of U.S. nurses, the attributes of collectivist cultures should be more widely understood and appreciated. With that aim, this study has provided important information to healthcare administrators in U.S. hospitals about Asian nurses, namely, that collectivist orientation, perception of practice environment, and organizational commitment are significantly related to intention to leave the current job. The key predictor of Asian nurses' intention to leave is organizational commitment.

As discussed previously, the defining qualities of the collectivist culture are highly associated with organizational commitment. People with a collectivist orientation view themselves as members of a group and often subordinate their personal goals to the goals of the group. Therefore, it is a natural step for Asian nurses to exhibit a high level of organizational commitment, as indicated by the nurses' willingness to exert effort on behalf of the organization and their strong desire to maintain membership in the organization. Thus, it is important that healthcare administrators recognize the advantages of the collectivist orientation to the organization and develop strategies to strengthen organizational commitment among those who are collectivist in orientation.

A first step for top healthcare administrators is to develop their own understanding of the collectivist culture and its benefits to healthcare organizations. By setting the example, administrators can ensure that other healthcare team members take positive

attitudes toward cultural diversity. Even Asian nurses can represent a variety of cultural perspectives on professional practices, personal needs, and need satisfiers, and those many differences should also be appreciated. Administrators also need to be aware of their own values, norms, and cultural biases. A move in that direction would be the promotion of cultural self-assessments (Xu & Davidhizar, 2004).

Recommendations for practice and administration include the importance of organizational policies that foster respect and trust for workers of all cultures are essential if Asian nurses are to adapt quickly and smoothly to the foreign work environment. As this study shows, lending considerable understanding and support to Asian nurses from the entire work environment, especially from administrators may help lead to the next step—increasing Asian nurses' satisfaction with their practice environment and organizational commitment. Furthermore, they are more willing to remain in and to work for the benefit of the organization.

Education

As Asian nurses become the majority of international nurses working in U.S. hospitals, nursing educators in the U.S. should come to understand that the concept of individualist-collectivist orientation is becoming an increasingly important topic in nursing administration and management courses. The nursing shortage has brought attention to the need to retain nurses. If we are to keep nurses, however, educators must introduce nursing students—who are our future healthcare leaders—to the concepts of perception of practice environment and organizational commitment. Current nursing educational programs deal with cultural issues only insofar as they relate to cultural

competence in the nurse-patient relationship. For example, Leininger's (1978) transcultural care emphasizes that the nurse should value and respect patients' cultural beliefs and needs. Now, however, healthcare providers have created their own culturally and ethnically diverse environments. To reflect that new reality, nursing educators should expand the concept of cultural competence from the nurse-patient perspective to the organizational perspective.

Recommendations for education regarding the roles, skills, and knowledge required for effective cultural competence in care of patients and in organizational participation should be introduced and provided to nursing students and the entire healthcare team. Ways to promote healthcare cultural competence among organizational members include courses, programs, or special events to increase understanding of cultural diversity, to encourage self-awareness of attitudes toward cultural differences, to cultivate respect for cultural differences, to model effective interaction styles, and to develop an atmosphere of trust among healthcare team members (Xu & Davidhizar, 2004). Finally, national symposia should be held to disseminate information about collectivism and about the importance of building cultural competence among healthcare team members.

Research

Because few other studies have investigated collectivist orientation, perception of practice environment, organizational commitment, and intention to leave current job among Asian nurses working in U.S. hospitals, the findings of the current study serve as a significant starting point for future research. Five implications for research are indicated

as follows.

First, in this study, organizational commitment was shown to be the best predictor of intention to leave, and that finding provides insight into the network of factors contributing to Asian nurses' intention to leave their organizations. The concept of organizational commitment and its antecedents and outcomes have been studied intensively and empirically in industrial settings, whereas they have been explored less well in the nursing field, and even less so in regard to Asian nurses working in the U.S. Therefore, future studies are needed to extend the findings of the current study.

Second, in the current study, the collectivist orientation has been found to be positively correlated to Asian nurses' perception of their practice environment and organizational commitment. The effects of acculturation on the collectivist orientation, which in turn can be supposed to influence the degree of perception of practice environment and organizational commitment, are worthy of further research.

Third, this study was conducted among Asian nurses with collectivist orientations and living in the U.S., a society representing an individualist culture. A promising research design would be one that explores the same variables in similar practice environment, but that also includes Western nurses in the sample. Such a study could compare the implications of the collectivist and individualist perspectives.

Fourth, this study included only three variables in the model addressing Asian nurses' intention to leave. Future studies are needed to explore and evaluate the effects of these variables and their operational definitions and measurement among Asian and non-Asian nurses. Validation of the uni-dimensionality of these concepts is worthy for

future research-based studies.

A final implication is that the issues surrounding cultural competence should be studied over time. The connection between healthcare team members' cultural competence and Asian nurses' perception of practice environment, organizational commitment, and intention to leave their current job is worthy of further exploration.

Study Limitations

The first limitation of this study is that its conceptual model was not cross-validated; hence, the prediction ability of the model could not be confirmed. Because of the cross-sectional design of the study, moreover, the results could not be used to explain causal relationships among variables. In addition, the use of the snowball sampling method prevents the results of this study from being generalized to the entire population of Asian nurses working in the U.S.

Therefore, these recommendations are made for future research. First, a longitudinal or time series study should be conducted to detect the causal relationships among the variables in the model. Second, the model developed in this study should be repeatedly tested in replications of this study in order to generalize the findings to the larger population of Asian nurses working in U.S. hospitals.

In spite of its limitations, the study has certain strengths that increase confidence in its results. First, the sample size in this study was estimated by a power analysis in which the minimal acceptable level of power was 0.8, which is the power needed to detect the true relationships among variables (Cohen, 1988; Polit & Beck, 2006). The sample size of 120 estimated for this study actually provided a power of 90%, which gives the results

from this sample a greater confidence level.

Second, response rate is a common concern about the adequacy of a sample (Gillis & Jackson, 2002). Polit and Hungler (1999) suggest that a response rate greater than 60% is probably sufficient for most purposes. In this study, the response rate was 74.5%. Even though the sampling method was nonprobabilistic, however, sample was representative of the proportion of ethnicities of Asian nurses in US practice.

Third, to obtain trustworthy data for statistical analyses, reliable and valid instruments are necessary (Burns & Grove, 2003). The reliability of each instrument used in this study was satisfactory according to its original study, the pilot study for the dissertation research, and in this main study. Evidence also supports the validity of all the instruments. In sum, the instruments in this study are highly appropriate for use among populations of English-speaking Asian nurses.

Conclusions

The healthcare workforce has become very diverse in U.S. hospitals. Minimal research has focused on the perceptions of culturally diverse healthcare providers toward their practice environment and organizations, and there is even less research targeting Asian nurses specifically. Results of this study indicate that Asian nurses are highly collectivist-oriented. This study also indicates that organizational commitment is a key predictor of Asian nurses' intention to leave. Moreover, organizational commitment has a significant positive relationship with collectivist orientation.

It is important, therefore, that administrators understand the characteristics of

collectivist cultures and organizational commitment. Furthermore, it is crucial that administrators know how to take advantage of the organizational benefits inherent in the collectivist orientation. With that knowledge, administrators can promote Asian nurses' commitment to their organizations and thereby reduce the rate of turnover. An alternative way to retain Asian nurses is to improve the nurses' perception of their practice environments, because perception of practice environment is an antecedent of organizational commitment and has an indirect effect on intention to leave current job.

The results of the current study provide reference important information for healthcare administrators in the U.S. who wish to measure factors that influence Asian registered nurses' satisfaction with their practice environment, organizational commitment to their hospitals, or intention to leave their current jobs. The findings help highlight that several other workplace factors also improve the retention of Asian nurses and bolster the willingness of those nurses to work for the benefit of the organization. This study provides important information that can help healthcare administrators understand the implications of differing cultural perspectives.

Appendix A

Pilot Study

Pilot Study

Purpose

The purpose of the pilot study was to test the reliability and validity of the following instruments: the Collectivism Orientation (CO), the Practice Environment Scale-Nursing Work Index (PES-NWI), the Organizational Commitment Questionnaire (OCQ), and the Anticipated Turnover Scale (ATS). Those instruments were used in the proposed main study. In addition to helping the investigator refine the measures as required for the main study, the pilot study also helped in the evaluation of the procedures planned for the main study.

Procedures

Sampling and Sample Size

The pilot began after the investigator received permission from the Department Review Commitment (DRC) and Institutional Review Board (IRB) at The University of Texas at Austin. The participants were 35 Asian nurses working in the U.S. Criteria for participation included the following: (a) the nurses who were either LPNs or RNs and were from China, Hong-Kong, India, Indonesia, Japan, Korea, Malaysia, the Philippines, Singapore, Thailand, Taiwan, Vietnam, or other countries in the Far East (b) they could either work full-time or part-time in staff or nonmanagement positions performing direct patient care, (c) they had to be working in U.S. hospitals, (d) they were not working for an agency (e.g., traveling nurses), (e) they were required to have been employed in the present practice area for at least 6 months, (f) they were able to speak, read, and write English, and (g) they had a home address, telephone, or e-mail address where they could

be reached.

Procedures for Recruiting Participants

All participants were Asian nurses identified by sources within the investigator's social network. All potential participants who met the recruitment criteria were asked to refer or introduce the investigator to friends who also met the study criteria and would be willing to participate. For participants who could not access the Internet or who preferred to use a paper-and-pen survey, a packet containing a cover letter, the questionnaires, and a self-addressed-and-stamped envelope was sent by mail. For those who preferred to complete the survey on a computer, a cover letter and a set of questionnaire were sent by e-mail. All completed instruments were sent back to the investigator by mail or e-mail.

Instruments

In this pilot study, all instruments used were in their English version. Research studies (Hulin, 1987; Uhl & Day, 1993) have revealed that within-language scales had fewer biased items than between-language scales. Therefore, in a study involving Asian nurses who worked in the U.S. and who could read, write, and speak English, the use of an English-language instrument was appropriate. The study would then avoid translation issues that could affect the measurement equivalence of the scales.

Questionnaire was comprised of four study instruments to measure Asian nurses' collectivist orientation (using the CO), perception of practice environment (using the PES-NIW), organizational commitment (using the OCQ), and intention to leave their current job (using the ATS). The demographic data form was used to gather participants' demographic information. In addition to those four instruments, the packet also contained

two other instruments, the Organizational Commitment (OC) scale and the Intention to Turnover Scale (ITS). Those two instruments were administered to provide data for testing the convergent validity of the OCQ and the ATS in this pilot study.

Results

Sample Characteristics

A total of 35 nurses participated in the pilot study (see Table A1). Of those participants, 33 were female (94.3%). Most of participants were married (71.4%) and were from the Philippines (37.1%) or Taiwan (28.6%). Their mean age was 37.17 (*SD* = 8.10). The majority had received a basic nursing education, that was, a bachelor's degree in nursing (*N* = 26, 74.3%), and only one participant had a master's degree. Thirty (85.7%) of the participants earned their basic nursing education in their mother countries. Nine participants (25.7%) earned their highest nursing education outside their countries of birth. Most of the Asian nurses worked full time (*N* = 27, 77.1%), and the average number of total years they had worked in the U.S. and worked in their current jobs was 8.30 years (*SD* = 8.49) and 4.52 (*SD*=6.15), respectively. The average number of years they had lived in the U.S. was 9.81 (*SD* = 8.39), which was longer than the average length of time they had practiced nursing in the U.S. They had worked an average of 4.51 years (*SD* = 3.77) before working in the U.S. Response rate for these participants were 76%.

Descriptive Results of Instruments

As shown in Table A2, the participants were generally collectivist-oriented (standardized mean score was 4.02). They generally perceived their practice environment

Table A1

Demographic Information of Subjects

Category		N	%
Gender	Female	33	94.3
	Male	2	5.7
Marital status	Single	7	20.0
	Married	25	71.4
	Divorced	1	2.9
	Missing	2	5.7
Country born	India	1	2.9
	Japan	2	5.7
	Korea	1	2.9
	PROC	5	14.3
	Philippines	13	37.1
	Taiwan	10	28.6
	Thailand	1	2.9
	USA	1	2.9
	Pakistan	1	2.9
Country of basic nursing education earned	India	1	2.9
	Japan	2	5.7
	Korea	1	2.9
	PROC	4	11.4
	Philippines	12	34.3
	Taiwan	9	25.7
	Thailand	1	2.9
	USA	3	8.6
	Others	2	5.7
Basic nursing education	AD	3	8.6
	Diploma	5	14.3
	BSN	26	74.3
	Missing	1	2.9
Highest degree of nursing education	AD	2	5.7
	Diploma	5	14.3
	BSN	27	77.1
	MSN	1	2.9

Table A1

Demographic Information of Subjects (Continue)

country of highest nursing education earned	India	1	2.9
	Japan	1	2.9
	Korea	1	2.9
	PROC	3	8.6
	Philippines	12	34.3
	Taiwan	7	20.0
	Thailand	1	2.9
	US	7	20.0
	Others	2	5.7
Work status	Full time	27	77.1
	Part time	8	22.9

	N	Range	Mean (SD)
Age	35	26-54	37.17 (8.10)
Years of practice before the U.S.	34	0-13	4.51(3.77)
Years of practice in the U.S.	33	0.5-30.33	8.30(8.49)
Years of living in the U.S.	35	0.5-30.33	9.81(8.39)
Years in current job	35	0.5-26.33	4.52(6.15)

Table A2

Descriptive Results of the Collectivist Orientation Scale, Practice Environment Scale of the Nursing Work Index, Organizational Commitment Questionnaire, and Anticipated Turnover Scale (N = 35)

Concept and Instruments	Scale possible range	Test range	Mean	SD	Standardized mean score
Collectivist orientation	4-20	6-20	16.09	3.32	4.02
Perception of practice environment	31-155	42-144	106.91	26.51	3.45
Nurse participation in hospital affairs	9-45	13-43	30.31	8.31	3.37
Nursing foundations for quality of care	10-50	17-48	37.85	7.93	3.78
Manager ability, leadership, and support	5-25	5-25	17.66	5.99	3.53
Staffing and resource adequacy	4-20	4-18	11.14	4.36	2.79
Collegial Nurse-physician relations	3-15	3-15	9.94	3.46	3.31
Organizational commitment	15-75	17-67	50.03	11.94	3.34
Intention to leave	12-60	16-52	34.89	8.33	2.91

as a professional nursing environment (standardized mean score was 3.45). However, they did not agree with the adequacies of staffing and resources in their practice environment (standardized mean score was 2.79). They had higher levels of agreement regarding other dimensions in the PES-NWI, namely, nurse participation in hospital affairs; nursing foundations for quality of care; manager ability, leadership, and support of nurses; and nurse-physician relations (standardized mean score was 3.37, 3.79, 3.53, and 3.31, respectively). Overall, the participants had high levels of organizational commitment (standardized mean score was 3.34) and had less intention to leave their current jobs (standardized mean score was 2.91).

Reliability and Validity of the Instruments

Reliability. The reliability of each of the four instruments—the CO, PES-NWI, OCQ, and ATS (and excluding the demographic information form)—was tested for Cronbach's alpha and item-total correlation (see Table A3). The Cronbach's alpha test is a measure of the internal consistency of items within an instrument, and an alpha coefficient of 0.70 is acceptable (Jacobson, 2004). Cronbach's alphas for the CO, OCQ, PES-NWI, and ATS were .73 (N = 35), .90 (N = 32), .95 (N = 33), and .85 (N = 35), respectively. Cronbach's alphas for the five subscales of the PES-NWI ranged from .84 to .93. In addition, the reliabilities of instruments in paper-pencil and e-mail form were calculated (see Table A4). Results showed that more participants using paper-pencil form completed the survey. The reliabilities for both types of survey were satisfactory.

The item-total correlations were also examined for the reliability of instruments. This correlation reflects how each item is related to the construct measured by the scale

Table A3

Reliabilities of Instruments in the Pilot Study (N = 35)

Instruments	Number of items	N	Cronbach's alpha	Item-total correlation
Collectivist Orientation (CO)	4	35	.73	.41-.67
Organizational Commitment Questionnaire (OCQ)	15	32	.90	.15-.90
Practice Environment (PES-NWI)	31	33	.95	.05-.80
Nurse participation in hospital affairs	9	35	.89	.29-.83
Nursing foundations for quality of care	10	33	.84	.37-.77
Nurse manager ability, leadership, and support of nurses	5	35	.93	.72-.91
Staffing and resource adequacy	4	35	.86	.64-.78
Collegial nurse-physician relations	3	35	.90	.79-.81
Anticipated Turnover Scale (ATS)	12	35	.85	.16-.70

Table A4

Reliability of Instruments for Paper-Pencil and Email Groups (N = 35)

Instrument	Item #	Paper-Pencil		Email	
		n	α	n	α
Collectivist Orientation (CO)	4	19	.52	16	.84
Practice Environment (PES- NWI)	31	18	.95	15	.94
Nurse participation in hospital affairs	9	19	.90	16	.88
Nursing foundations for quality of care	10	18	.82	15	.80
Nurse manager ability, leadership, and support of nurses	5	19	.93	16	.92
Staffing and resource adequacy	4	19	.83	16	.88
Collegial nurse-physician relations	3	19	.86	16	.91
Organizational Commitment Questionnaire (OCQ)	15	18	.91	14	.90
Anticipated Turnover Scale (ATS)	12	19	.76	16	.91

and is represented by the coefficient between one item and the remaining items in the scale (Devellis, 2003). A value higher than .20 is considered satisfactory (Streiner & Norman, 1995).

The results (see Table A3) of the item-total correlation coefficients for the CO, OCQ, PES-NWI, and ATS ranged from .41 to .67, .15 to .90, .05 to .80, and .16 to .70, respectively. All items, except for item 7 in the OCQ, item 15 and 30 in the PES-NWI, and item 11 in the ATS, had an item-total correlation coefficient lower than .20. Item 7 in the OCQ, "I would just as well be working for a different organization as long as the type of work was similar," had a correlation coefficient of .15. Item 15 and 30 in PES-NWI, "A chief nurse officer equal in power and authority to other top-level hospital executives" and "Patient care assignments that foster continuity of care, i.e., the same nurse cares for the patient from one day to the next," had correlation coefficients of .18 and .05, respectively. Item 11 in ATS, "There are big doubts in my mind as to whether or not I will really stay in this organization," had a correlation coefficient of .16. However, these items were not revised or deleted because the Cronbach's alpha for each instrument was high (alphas ranging from .73 to .95). In addition, when the low item-total correlation items were discarded from the instrument, the reliability for each instrument did not increase.

Validity. In this pilot study, the validity of all instruments was tested by content, convergent, or discriminant validity (see Table A5). A discriminant validity test of the CO showed low correlations between different concepts with the same people. Two general questions of individualism, "Only those who depend on themselves get ahead in life," and "To be superior a person must stand alone," were used to assess their correlation with

Table A5

Correlations of Instruments for Validity

	CO	OCQ	ATS	IO1[a]	IO2[b]	OC
CO	1.00					
OCQ	0.31	1.00				
ATS	-0.24	-0.71**	1.00			
IO1[a]	*0.00*	-0.10	-0.06	1.00		
IO2[b]	*-0.25*	-0.09	0.01	0.42*	1.00	
OC	0.56**	*0.80***	-0.46**	-0.01	-0.07	1.00
ITS	-0.09	-0.55**	*0.40**	0.06	0.19	-0.35*

Note. [a]IO1 is the question of individualism orientation: "Only those who depend on themselves get ahead in life." [b] IO2 is the question of individualism orientation: "To be superior a person must stand alone.
* $p < .05$, ** $p < .001$

the CO. As a result, no significant correlation between the CO and these two general questions of individualism was desired or found ($r < .001$ and -.25 respectively; Goodwin, 2002). This result was evidence for the validity of the CO.

The convergent validity of the OCQ and ATS was assessed by their correlations with the Organizational Commitment (OC) scale and the Intention of Turnover Scale (ITS), respectively. The results of the correlation coefficient between measures are hypothesized to be high and significant (Robinson, Shaver, & Wrightsman, 1991). The OCQ was significantly and positively related to the OC ($r = .80$). The ATS was significantly and positively related to the ITS ($r = .40$). Consequently, the validity of the OCQ and the ATS was supported.

The content validity of the PES-NWI was measured by calculating the Percentage of Agreement. A Percentage of Agreement at the level of 80% is preferred (Polit & Hungler, 1999). The percentage of agreement for each item of the PES-NWI ranged from 79.4% to 100%. Only item 31 had an agreement percentage slightly lower than 80%. Therefore, the evidence supported the validity of the PES-NWI (see Table A6).

Summary

The purpose of this pilot study was to examine the reliability and validity of the CO, OCQ, PES-NWI, and ATS. In addition, it helped in the determination of feasible research procedures for the study of Asian nurses working in the U.S. Furthermore, the pilot study provided the investigator with statistical information that helped estimate the sample size for the main study. The results of the pilot study provided evidence of reliability and validity for all instruments selected for the study. The sample size for the

Table A6

Agreement of the PES-NWI Items among Subjects

	Meaningful-Important			
	yes-yes[a] N(%)	yes-no[b] N(%)	no-yes[c] N(%)	no-no[d] N(%)
1. Adequate support services allow me to spend time with my patients	32 (94.1)	0 (0.0)	2 (5.9)	0 (0.0)
2. Physicians and nurses have good working relationships	32 (97.0)	1 (3.0)	0 (0.0)	0 (0.0)
3. A supervisory staff that is supportive of the nurses	32 (97.0)	0 (0.0)	1 (3.0)	0 (0.0)
4. Active staff development or continuing education programs for nurses	33 (100)	0 (0.0)	0 (0.0)	0 (0.0)
5. Career development/clinical ladder opportunity	29 (87.9)	0 (0.0)	4 (12.1)	0 (0.0)
6. Opportunity for staff nurses to participate in policy decisions	28 (82.4)	3 (8.8)	2 (5.9)	1 (2.9)
7. Supervisors use mistakes as learning opportunities, not criticism	32 (94.1)	0 (0.0)	1 (2.9)	1 (2.9)
8. Enough time and opportunity to discuss patient care problems with other nurses	30 (88.2)	1 (2.9)	2 (5.9)	1 (2.9)
9. Enough nurses to provide quality patient care	30 (90.9)	0 (0.0)	3 (9.1)	0 (0.0)
10. A nurse manager who is a good manager and leader	31 (91.2)	0 (0.0)	2 (5.9)	1 (2.9)
11. A chief nursing officer who is highly visible and accessible to staff	28 (80.0)	2 (5.7)	3 (8.6)	2 (5.7)
12. Enough staff to get the work done	32 (91.4)	1 (2.9)	2 (5.7)	0 (0.0)
13. Praise and recognition for a job well done	33 (94.3)	1 (2.9)	0 (0.0)	1 (2.9)
14. High standards of nursing care are expected by the administration.	31 (91.2)	0 (0.0)	2 (5.9)	1 (2.9)
15. A chief nurse officer equal in power and authority to other top-level hospital executives	30 (85.7)	0 (0.0)	1 (2.9)	4 (11.4)
16. A lot of team work between nurses and physicians	35 (100)	0 (0.0)	0 (0.0)	0 (0.0)
17. Opportunities for advancement	34 (97.1)	0 (0.0)	0 (0.0)	1 (2.9)

Table A6

Agreement of the PES-NWI Items among Subjects (Continue)

	Meaningful-Important			
	yes-yes[a] N(%)	yes-no[b] N(%)	no-yes[c] N(%)	no-no[d] N(%)
18. A clear philosophy of nursing that pervades the patient care environment	34 (97.1)	0 (0.0)	0 (0.0)	1 (2.9)
19. Working with nurses who are clinically competent	34 (97.1)	0 (0.0)	0 (0.0)	1 (2.9)
20. A nurse manager who backs up the nursing staff in decision making, even if the conflict is with a physician	34 (97.1)	1 (2.9)	0 (0.0)	0 (0.0)
21. Administration that listens and responds to employee concerns	33 (94.3)	1 (2.9)	1 (2.9)	0 (0.0)
22. An active quality assurance program	34 (97.1)	1 (2.9)	0 (0.0)	0 (0.0)
23. Staff nurses are involved in the internal governance of the hospital (e.g., practice and policy committees)	31 (91.2)	2 (5.9)	0 (0.0)	1 (2.9)
24. Collaboration (joint practice) between nurses and physicians	33 (97.1)	1 (2.9)	0 (0.0)	0 (0.0)
25. A preceptor program for newly hired RNs	34 (100)	0 (0.0)	0 (0.0)	0 (0.0)
26. Nursing care is based on a nursing model, rather than a medical	29 (85.3)	2 (5.9)	1 (2.9)	2 (5.9)
27. Staff nurses have the opportunity to serve on hospital and nursing committees	30 (88.2)	0 (0.0)	1 (2.9)	3 (8.8)
28. Nursing administrators consult with staff on daily problems and procedures	29 (85.3)	1 (2.9)	2 (5.9)	2 (5.9)
29. Written, up-to-date nursing care plans for all patients	30 (88.2)	0 (0.0)	2 (5.9)	2 (5.9)
30. Patient care assignments that foster continuity of care, i.e., the same nurse cares for the patient from one day to the next	28 (82.4)	3 (8.8)	2 (5.9)	1 (2.9)
31. Use of nursing diagnoses	27 (79.4)	2 (5.9)	2 (5.9)	3 (8.8)

Note. [a]yes-yes: answer yes to both meaningful and important; [b]yes-no: answer yes to meaningful but no to important; [c]no-yes: answer no to meaningful but yes to important; [d]no-no: answer both no to meaningful and important.

main study was estimated based on the results of this pilot study; specifically, 120 Asian nurses that achieved a power of .92 were be recruited for the main study.

Overall, Asian nurses working in the U.S. were collectivist-oriented. They generally perceived their practice environment as a professional nursing environment, although they did not agree with the adequacies of staffing and resources in their practice environment. The level of their commitment to their hospital was high, and their intention to leave their current jobs was scored low.

The length of time taken to recruit 35 Asian nurses was around 2 months. A possible reason for this length of time was that the Asian nurses were very busy with their jobs and families. Many had infants and other children to care for. Nevertheless, as indicated by the high completion rate, the Asian nurses participating in the pilot study tried their best to answer all questions. Therefore, the pilot study provided a strong indication that a main study focusing on Asian nurses working in the U.S is a feasible undertaking.

Appendix B

Permission for Instrument Use

Date: Sun, 30 Oct 2005 14:31:11 -0700
From: Jan Atwood <j.atwood@worldnet.att.net>
To: srliou5022@mail.utexas.edu
Cc: "Dr. Ada Sue Hinshaw" <ahinshaw@umich.edu>
Subject: ATS Scale attached
Part(s): 2 Anticipated Turnover Scale (ATS)ash application/octet-stream 2040.32 KB
3 ATSInstrLtrShwu-Ru1005l.doc application/msword 32.84 KB

This message was written in a character set other than your own. If it is not displayed correctly, click here to open it in a new window.

Dear Doctoral Student Shwu-Ru Liou,
Attached please find the following Anticipated Turnover materials:
. the Anticipated Turnover Scale
.its scoring key
.an abstract about it
.an abstract from the federally funded Anticipated Turnover Study of which it was a part.
Attached also please find the letter of permission and information. Since Dr. Hinshaw was the primary author on that scale, please feel free to contact either of us with questions.
Please let me know whether or not both attachments arrived in useable form. It is easy to mail hard copies, if needed.

Best Wishes with your work,
Jan R. Atwood, PhD, RN, FAAN
Professor Emerita
University of Nebraska Medical Center
2331 E. Nasturtium St.
Tucson, AZ 5755
(520) 825-8298 (land line and fax)
(402) 321-3766 (cell for now)

----- Original Message -----
From: <srliou5022@mail.utexas.edu>
To: "Jan Atwood" <j.atwood@worldnet.att.net>
Sent: Thursday, October 27, 2005 4:30 PM

> Doctoral Student
> School of Nursing
> University of Texas at Austin
> Phone: 512-3891104
> Email: srliou5022@mail.utexas.edu
>
>
>
> ¤Þ¥Î Jan Atwood <j.atwood@worldnet.att.net>:
>
> > Dear Doctoral Student Shwu-Ru Liou,
> >
> > Lori Cooley has kindly forwarded your request. Dr. Hinshaw and I would
> > be pleased to have you view our instruments for you dissertation and use them
> > if they still fit your purposes. The materials and more formal permission
> > will be forwarded to you shortly. Please provide a fax number or land mail
> > address for whatever aspects are not suitable for email.
> >
> > Sincerely,
> > Jan R. Atwood, PhD, RN, FAAN
> > Professor Emerita
> > University of Nebraska Medical Center
> > 231 E. Nasturtium St.
> > Tucson, AZ 5755
> > (520) 825-8298 (land line and fax)
> > (402) 321-3766 (cell for now)

33.81MB / 100.00MB (33.81%)

Date: Thu, 29 Sep 2005 12:38:12 -0500
From: Lei Wang <leiwang@utpa.edu>
To: "srliou5022@mail.utexas.edu" <srliou5022@mail.utexas.edu>
Reply-to: "leiwang@utpa.edu" <leiwang@utpa.edu>
Subject: RE: asking for permission abut use of questionnaire

Shwu-ru,

I checked with my co-authors about their opinions on your request for using the questionnaire. All of us have no problem with your using the questionnaire as long as you properly acknowledge it and inform us before you try to publish anything out of it. Hope you go well with your dissertation research.

Lei Wang

33.81MB / 100.00MB (33.81%)

Date: Sun, 25 Sep 2005 20:35:04 -0700
From: Rick Mowday <rmowday@lcbmail.uoregon.edu>
To: srliou5022@mail.utexas.edu
Subject: RE: Asking for permission about use of OCQ

This message was written in a character set other than your own. If it is not displayed correctly, click here to open it in a new window.

Shwu-ru

The Organizational Commitment Questionnaire (OCQ) was originally developed by Lyman Porter.
He never copyrighted the instrument because he wanted to encourage others to use it. Thus, the
OCQ exists in the public domain and it is unnecessary to have permission for its use.

Good luck on your pilot study.

Rick

33.81MB / 100.00MB (33.81%)

Date: Thu, 8 Sep 2005 11:11:51 -0400
From: "Lake, Eileen" <elake@nursing.upenn.edu>
To: ""srliou5022@mail.utexas.edu"" <srliou5022@mail.utexas.edu>
Subject: RE: asking for the practice environment scale (PES)
Part(s):

2	prnursingcarevcsFINAL1-30-04.pdf	application/octet-stream	248.21 KB
3	PES-NWI subscales and scoring.doc	application/msword	41.74 KB
4	Practice Environment Scale of the Nursing Work Index.sms.doc	application/msword	84.84 KB

Dear Ms. Liou,
Thank you for your request. The PES is in the public domain and therefore you do not need my permission but I am glad to receive your inquiry. Attached are several documents you might find useful. Please let me know how your work goes. Good luck!
Dr. Lake

Eileen Lake, PhD, RN

Assistant Professor, School of Nursing

Secondary Faculty, Department of Sociology

University of Pennsylvania

Philadelphia, PA 19104-6096

215-898-2557; 215-573-2062 (fax)

Appendix C

Cover Letter and Instruments

IRB APPROVAL: 02/07/2007 *APPROVAL EXPIRES: 02/06/2008*
IRB PROTOCOL # 2007-01-0093

Informed Consent to Participate in Research

The University of Texas at Austin
Cover Letter

TITLE: The Relationships between Collectivist Orientation, Perception of Practice Environment, Organizational Commitment, and Intention to Leave Current Job among Asian Nurses Working in the U.S.

Conducted By:
Shwu-Ru Liou, MHA, RN
The University of Texas at Austin: School of Nursing; 512-389-1104 srlioudissertation@gmail.com

Faculty Sponsor:
Susan J. Grobe, PhD, RN, FAAN, FACMI
The University of Texas at Austin: School of Nursing; 512-232-4705

Eun-Ok Im, PhD, MPH, RN, CNS, FAAN
The University of Texas at Austin: School of Nursing; 512-471-7971

You are being asked to participate in a research study. This form provides you with information about the study. The person in charge of this research will describe this study to you and answer all of your questions. Please read the information below and ask questions about anything you don't understand before deciding whether or not to take part. Your participation is entirely voluntary and you can refuse to participate without penalty or loss of benefits to which you are otherwise entitled. You can stop your participation at any time by simply telling the researcher. In addition, you do not have to answer any questions that make you uncomfortable. If you wish to know the results of the study, please contact the investigator. A copy of results will be provided.

The purpose of this study is to examine the relationships among cultural orientation toward collectivism, perception of practice environment, organizational commitment, and intention to leave the current job among Asian registered nurses working in the U.S. A total of 120 Asian nurses will be asked to participate.

If you agree to be in this study, we will ask you to do the following things:
- Complete and mail or email back a total of five-page questionnaire (82 items) including a demographic sheet.

Total estimated time to participate in the study is about 15 minutes.

Risks and Benefits of being in the study
- No risks (physical, psychological, social or otherwise) are expected as a result of participating in this study. No deception is planned.
- The information gathered in this study will be used to measure the study variables among Asian nurses working in the U.S. This can be helpful for nursing administrators in developing workplace strategies to retain Asian nurses.
- Loss of confidentiality is a possible risk in this study, although highly unlikely.

Compensation:

- You will receive 5 dollars as a token of appreciation for participating once you return the completed questionnaire.

The records of this study will be stored securely and kept private. All returned questionnaires with data will be assigned a random number instead of subject's name. The questionnaires and returned envelopes will be stored separately. Paper questionnaires will be stored in a locked place accessible only to this researcher. Emails that may identify you will be deleted. No names or any identification information will be used in the data set. The results of the study will be presented as group data rather than as individual information. The data resulting from your participation may be made available to other researchers in the future for research purposes not detailed within this consent form. In these cases, the data will contain no identifying information that could associate you with it, or with your participation in any study.

Authorized persons from The University of Texas at Austin, members of the Institutional Review Board and (study sponsors, if any) have the legal right to review your research records and will protect the confidentiality of those records to the extent permitted by law. All publications will exclude any information that will make it possible to identify you as a subject.

Contacts and Questions:

If you have any questions about the study please contact the researchers. Their names, phone numbers, and e-mail addresses are at the top of this page.

If you have questions about your rights as a research participant, complaints, concerns, or questions about the research please contact Jody Jensen, Ph.D., The University of Texas at Austin Institutional Review Board for the Protection of Human Subjects, (512) 232-2685 or the Office of Research Support and Compliance at (512) 471-8871 or email: orsc@uts.cc.utexas.edu.

Statement of Consent:

By completing and returning completed questionnaires, you consent to participate in this study. You do not need to return this cover letter back to the investigator – please feel free to keep a copy for your records. Please do not sign or put any your identification information on this cover letter or questionnaire.

Asian Nurses Study

Today's date:
_____ (year) _____ (month)

I. The Practice Environment Scale

INDICATE the **DEGREE** of your **DISAGREEMENT** or **AGREEMENT** with each statement that is **PRESENT IN YOUR CURRENT JOB** by checking the appropriate box.

	Strongly disagree	**Slightly disagree**	**Neutral**	**Slightly agree**	**Strongly agree**
1. Adequate support services allow me to spend time with my patients…….....	☐	☐	☐	☐	☐
2. Physicians and nurses have good working relationships..…….	☐	☐	☐	☐	☐
3. A supervisory staff that is supportive of the nurses……	☐	☐	☐	☐	☐
4. Active staff development or continuing education programs for nurses……..	☐	☐	☐	☐	☐
5. Career development/clinical ladder opportunity……	☐	☐	☐	☐	☐
6. Opportunity for staff nurses to participate in policy decisions…..	☐	☐	☐	☐	☐
7. Supervisors use mistakes as learning opportunities, not criticism.	☐	☐	☐	☐	☐
8. Enough time and opportunity to discuss patient care problems with other nurses……	☐	☐	☐	☐	☐
9. Enough registered nurses to provide quality patient care……..	☐	☐	☐	☐	☐
10. A nurse manager who is a good manager and leader…….	☐	☐	☐	☐	☐
11. A chief nursing officer who is highly visible and accessible to staff…….	☐	☐	☐	☐	☐
12. Enough staff to get the work done……..	☐	☐	☐	☐	☐
13. Praise and recognition for a job well done…….	☐	☐	☐	☐	☐
14. High standards of nursing care are expected by the administration…….	☐	☐	☐	☐	☐
15. A chief nurse officer equal in power and authority to other top-level hospital executives……..	☐	☐	☐	☐	☐
16. A lot of team work between nurses and physicians……...	☐	☐	☐	☐	☐
17. Opportunities for advancement……..	☐	☐	☐	☐	☐
18. A clear philosophy of nursing that pervades the patient care environment……	☐	☐	☐	☐	☐

	Strongly disagree	Slightly disagree	Neutral	Slightly agree	Strongly agree
19. Working with nurses who are clinically competent……..	☐	☐	☐	☐	☐
20. A nurse manager who backs up the nursing staff in decision making, even if the conflict is with a physician…….	☐	☐	☐	☐	☐
21. Administration that listens and responds to employee concerns…	☐	☐	☐	☐	☐
22. An active quality assurance program…….	☐	☐	☐	☐	☐
23. Staff nurses are involved in the internal governance of the hospital (e.g., practice and policy committees)……..	☐	☐	☐	☐	☐
24. Collaboration (joint practice) between nurses and physicians…...	☐	☐	☐	☐	☐
25. A preceptor program for newly hired RNs…….	☐	☐	☐	☐	☐
26. Nursing care is based on a nursing model, rather than a medical..	☐	☐	☐	☐	☐
27. Staff nurses have the opportunity to serve on hospital and nursing committees……	☐	☐	☐	☐	☐
28. Nursing administrators consult with staff on daily problems and procedures……..	☐	☐	☐	☐	☐
29. Written, up-to-date nursing care plans for all patients……...	☐	☐	☐	☐	☐
30. Patient care assignments that foster continuity of care, i.e., the same nurse cares for the patient from one day to the next…….	☐	☐	☐	☐	☐
31. Use of nursing diagnoses……	☐	☐	☐	☐	☐

II. The Collectivist Orientation

INDICATE the **DEGREE** of your **DISAGREEMENT** or **AGREEMENT** with each statement by checking the appropriate box.

	Strongly disagree	Slightly disagree	Neutral	Slightly agree	Strongly agree
1. An employee should accept the group's decision even when personally he or she has a different opinion…..…….	☐	☐	☐	☐	☐
2. Problem solving by groups gives better results than problem solving by individuals.…….…..	☐	☐	☐	☐	☐
3. The performance of one's work group or unit is more important than one's own individual performance…….	☐	☐	☐	☐	☐
4. Working with a group is better than working alone……...	☐	☐	☐	☐	☐

III. The Organizational Commitment Questionnaire

INDICATE the **DEGREE** of your **DISAGREEMENT** or **AGREEMENT** with respect to your feelings about **THE HOSPITAL** or **ORGANIZATION** in which you **CURRENTLY WORK** by checking the appropriate box.

	Strongly disagree	**Slightly disagree**	**Neutral**	**Slightly agree**	**Strongly agree**
1. I am willing to put in a great deal of effort beyond that normally expected in order to help this organization be successful……..	☐	☐	☐	☐	☐
2. I talk up this organization to my friends as a great organization to work for……..	☐	☐	☐	☐	☐
3. I feel very little loyalty to this organization…….....	☐	☐	☐	☐	☐
4. I could accept almost any types of job assignment in order to keep working for this organization…….....	☐	☐	☐	☐	☐
5. I find that my values and the organization's values are very similar…….	☐	☐	☐	☐	☐
6. I am proud to tell others that I am part of this organization……...	☐	☐	☐	☐	☐
7. I would just as well be working for a different organization as long as the type of work was similar…….	☐	☐	☐	☐	☐
8. This organization really inspires the very best in me in the way of job performance…….....	☐	☐	☐	☐	☐
9. It would take very little change in my present circumstances to cause me to leave this organization…….....	☐	☐	☐	☐	☐
10. I am extremely glad that I chose this organization to work for over others I was considering at the time I joined……..	☐	☐	☐	☐	☐
11. There is not too much to be gained by sticking with this organization indefinitely…….	☐	☐	☐	☐	☐
12. Often, I find it difficult to agree with this organization's policies on important matters relating to its employees…….	☐	☐	☐	☐	☐
13. I really care about the fate of this organization……..	☐	☐	☐	☐	☐
14. For me, this is the best of all possible organizations for which to work……	☐	☐	☐	☐	☐
15. Deciding to work for this organization was a definite a mistake on my part……...	☐	☐	☐	☐	☐

IV. Anticipated Turnover Scale

INDICATE the **DEGREE** of your **DISAGREEMENT** or **AGREEMENT** with each statement by checking the appropriate box.

	Strongly disagree	**Slightly disagree**	**Neutral**	**Slightly agree**	**Strongly agree**
1. I plan to stay in my position awhile…….	☐	☐	☐	☐	☐
2. I am quite sure I will leave my position in the foreseeable future……...……..…	☐	☐	☐	☐	☐
3. Deciding to stay or leave my position is not a critical issue for me at this point in time…….…..	☐	☐	☐	☐	☐
4. I know whether or not I'll be leaving this organization with a short time……..	☐	☐	☐	☐	☐
5. If I got another job offer tomorrow, I would give it serious consideration…….....	☐	☐	☐	☐	☐
6. I have no intentions of leaving my present position……	☐	☐	☐	☐	☐
7. I have been in my position about as long as I want to…….	☐	☐	☐	☐	☐
8. I am certain I will be staying here awhile……	☐	☐	☐	☐	☐
9. I don't have any specific idea how much longer I will stay…….	☐	☐	☐	☐	☐
10. I plan to hang on to this job awhile……..	☐	☐	☐	☐	☐
11. There are big doubts in my mind as to whether or not I will really stay in this organization……..……...	☐	☐	☐	☐	☐
12. I plan to leave this position shortly……..	☐	☐	☐	☐	☐

V. Demographic Data: Please complete the following information (for statistical purposes)

1. Gender: ☐ Male ☐ Female
2. Age:_____ years _____ months
3. Licensed RN in what state now? _____
4. Country where you were born:
   ☐ China ☐ India ☐ Indonesia ☐ Japan ☐ Korea ☐ Philippines
   ☐ Singapore ☐ Taiwan ☐ Thailand ☐ Vietnam ☐ Other:_____
5. Marital status: ☐ Single ☐ Married ☐ Divorced ☐ Widowed ☐ Other: _____
6. Where did you receive your BASIC nursing education?
   ☐ China ☐ India ☐ Indonesia ☐ Japan ☐ Korea ☐ Philippines
   ☐ Singapore ☐ Taiwan ☐ Thailand ☐ US ☐ Vietnam ☐ Other:_____
7. What is your BASIC nursing education?
   ☐ Associated degree (AD) ☐ Diploma ☐ Bachelor (BSN) ☐ Other:_____
8. Indicate the HIGHEST degree in nursing you have obtained?
   ☐ Associated degree (AD) ☐ Bachelor (BSN) ☐ Master's ☐ Other: _____
9. Where did you receive the HIGHEST degree of education in nursing?
   ☐ China ☐ India ☐ Indonesia ☐ Japan ☐ Korea ☐ Philippines
   ☐ Singapore ☐ Taiwan ☐ Thailand ☐ US ☐ Vietnam ☐ Other:_____
10. What language can you speak?
   ☐ Mother language only ☐ Mostly mother language, some English
   ☐ Mother language and English about equally well ☐ Mostly English, some mother language
   ☐ Only English
11. What language do you prefer?
   ☐ Mother language only ☐ Mostly mother language, some English
   ☐ Mother language and English about equally well ☐ Mostly English, some mother language
   ☐ Only English
12. How do you identify yourself?
   ☐ Oriental ☐ Asian ☐ Asian-American
   ☐ Chinese-American, Philippine-American, etc. ☐ American
13. Where were you raised?
   ☐ In Asian only ☐ Mostly in Asia, some in US ☐ Equally in Asia and US
   ☐ Mostly in US, some in Asia ☐ In US only
14. How would you rate yourself?
   ☐ Very Asian ☐ Mostly Asian ☐ Bicultural ☐ Mostly Westernized ☐ Very Westernized
15. How many years did you practice nursing before practicing in the US? _____ years _____ months
16. What is your current employment status? ☐ full-time ☐ part-time ☐ Other:_____
17. How long have you lived in the US? _____ years _____ months
18. How long did you practice nursing in the US? _____ years _____ months
19. How long have you worked in your current position? _____ years _____ months
20. What type of unit you work now? ☐ Med/Surg ☐ Intensive care (ICU, OR, PACU/recovery room, Telemetry) ☐ Ob/Gyn ☐ Pediatric ☐ Rehabilitation ☐ Others:_____

~~ The End ~~

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